

FCC

SAR

TEST REPORT

ISSUED BY
Shenzhen BALUN Technology Co., Ltd.



FOR
Mobile Phone

ISSUED TO
GUANGDONG OPPO MOBILE TELECOMMUNICATIONS
CORP., LTD.

NO. 18 HaiBin Road, WuSha village, Chang An Town, DongGuan City,
Guangdong, China



Tested by: *Zong Liyao*
Zong Liyao

Date: *May 09, 2020*

Approved by: *Wei Yanquan*
Wei Yanquan
(Chief Engineer)

Date: *May 09, 2020*

Report No.: BL-SZ2030336-701
EUT Name: Mobile Phone
Model Name: A002OP
Brand Name: OPPO
FCC ID: R9C-A002OP
Test Standard: FCC 47 CFR Part 2.1093
ANSI C95.1: 1999, IEEE 1528: 2013
Maximum SAR: Head (1 g): 1.192 W/kg
Body (1 g): 0.874 W/kg
Specific (10 g): 0.849 W/kg
Test Conclusion: Pass
Test Date: Mar. 23, 2020 ~ Apr. 12, 2020
Date of Issue: May 09, 2020

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Revision History

<u>Version</u>	<u>Issue Date</u>	<u>Revisions Content</u>
<u>Rev. 01</u>	<u>May 09, 2020</u>	<u>Initial Issue</u>

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1 GENERAL INFORMATION

1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100
Fax Number	+86 755 6182 4271

1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	<p>The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1.</p> <p>The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.</p> <p>The laboratory is a testing organization accredited by American Association for Laboratory Accreditation (A2LA) according to ISO/IEC 17025. The accreditation certificate is 4344.01.</p> <p>The laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6791.</p>
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

1.3 Test Environment Condition

Ambient Temperature	20°C to 23°C
Ambient Relative Humidity	36% to 49%
Ambient Pressure	100 KPa to 102 KPa

1.4 Announce

- (1) The test report reference to the report template version v2.2.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- (5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.
- (6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (7) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	GUANGDONG OPPO MOBILE TELECOMMUNICATIONS CORP., LTD.
Address	NO. 18 HaiBin Road, WuSha village, Chang An Town, DongGuan City, Guangdong, China

2.2 Manufacturer Information

Manufacturer	GUANGDONG OPPO MOBILE TELECOMMUNICATIONS CORP., LTD.
Address	NO. 18 HaiBin Road, WuSha village, Chang An Town, DongGuan City, Guangdong, China

2.3 Factory Information

Factory	GUANGDONG OPPO MOBILE TELECOMMUNICATIONS CORP., LTD.
Address	NO. 18 HaiBin Road, WuSha village, Chang An Town, DongGuan City, Guangdong, China

2.4 General Description for Equipment under Test (EUT)

EUT Name	Mobile Phone
Model Name Under Test	A002OP
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	11
Software Version	ColorOS V7.1
Dimensions (Approx.)	160.9x74.1x8.2mm
Weight (Approx.)	177g(with battery)

2.5 Ancillary Equipment

Ancillary Equipment 1	Li-Polymer Battery 1	
	Brand Name	OPPO
	Model No.	BLP765
	Serial No.	N/A
	Capacitance	Rated: 3935mAh/15.22Wh Typical: 4025mAh/15.57Wh
	Rated Voltage	3.87 V
	Limited Voltage	4.45 V
	Manufacturer	NAVITASYS TECHNOLOGY LIMITED
Ancillary Equipment 2	Li-Polymer Battery (alternative) 2	
	Brand Name	OPPO
	Model No.	BLP765
	Serial No.	N/A
	Capacitance	Rated: 3935mAh/15.22Wh Typical: 4025mAh/15.57Wh
	Rated Voltage	3.87 V
	Limited Voltage	4.45 V
	Manufacturer	SCUD
Ancillary Equipment 3	Headset	
	Model No.	MH156
	Length (Approx.)	1.2 m
Note: All batteries are tested, only the worst data of BLP765 (NAVITASYS TECHNOLOGY LIMITED) shown in this report.		

2.6 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/1900 MHz 3G Network WCDMA/HSDPA/HSUPA/HSPA+/DC-HSDPA Band 2/4/5 4G Network FDD LTE Band 2/4/5/7/26 TDD LTE Band 38/41 LTE CA Uplink (UL): CA_38C LTE CA Downlink (DL): CA_7B, CA_7C, CA_38C, CA_41C, 7A-7A, 41A-41A, 7A-28A, 5A-41A, 28A-41A, 28A-38A Bluetooth 5.0 (BR+EDR+BLE) 2.4G WIFI 802.11b, 802.11g, 802.11n(HT20) 5G WIFI 802.11a, 802.11n(HT20/40) and 802.11ac(VHT20/40/80) Band 1/2/3/4 SRD NFC, GPS, GLONASS, BDS, Galileo, FM Receiver
Note: The EUT is a mobile phone, which supports dual SIM card under the same transceiver. Each SIM supports GSM, WCDMA and LTE, and both SIM share the same transmitting electro circuit, NV parameters, so only SIM1 was tested in this report.	

The requirement for the following technical information of the EUT was tested in this report:

Operating Mode	GSM, WCDMA, LTE, 2.4G WLAN, 5G WLAN, Bluetooth		
Frequency Range	GSM 850	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	GSM 1900	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	WCDMA Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	WCDMA Band 4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	WCDMA Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	LTE Band 4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	LTE Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE Band 7	TX: 2500 ~ 2570 MHz	RX: 2620 ~ 2690 MHz
	LTE Band 26	TX: 814 ~ 849 MHz	RX: 859 ~ 894 MHz
	LTE Band 38	TX: 2570 ~ 2620 MHz	RX: 2570 ~ 2620 MHz
	LTE Band 41	TX: 2496 ~ 2690 MHz	RX: 2496 ~ 2690 MHz
	802.11b/g/n(HT20)	2400 ~ 2483.5 MHz	
	802.11a/n(HT20/HT40)/ac(VHT20/VHT40/VHT80)	5150 ~ 5250 MHz	5250 ~ 5350 MHz
	5470 ~ 5725 MHz	5725 ~ 5850 MHz	
Bluetooth	2400 ~ 2483.5 MHz		
Antenna Type	WWAN: PIFA Antenna WLAN: PIFA Antenna Bluetooth: PIFA Antenna		
DTM	Not Support		
Hotspot Function	Support		
Power Reduction	Support		

Exposure Category	General Population/Uncontrolled exposure	
EUT Stage	Portable Device	
Product	Type	
	<input checked="" type="checkbox"/> Production unit	<input type="checkbox"/> Identical prototype
Note: <ol style="list-style-type: none">1. The Power Reduction please refer to section 8.7.2. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.3. This device 2.4GHz WLAN/5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WiFi Direct (GC/GO), and 5.3GHz WLAN/5.5GHz WLAN supports WiFi Direct (GC only)4. This device has two WWAN transmit antennas. WWAN down antenna is located at the bottom edge of the device, and WWAN up antenna is located at the top edge of the device. Up and Down antenna support the same WWAN frequency bands, and they can't transmit simultaneously.		

2.7 Power Reduction Description

This mobile phone device supports the receiver detection mechanism. This device uses the receiver to indicate whether the user is making a call in head , body or hand.

When there is a voice call (including VOIP) and the audio is actively routed through the earpiece receiver, which indicating the head exposure condition it will trigger the head exposure reduced the power.

When there is a voice call (including VOIP), and the audio is actively routed through the headset or speaker, which indicating the body or extremity exposure conditions will trigger the body or extremity exposure reduced the power.

When this device used data mode only, and the receiver will not work too, the reduced the power are same as body or extremity exposure.

For body or limbs mode, this product not support power reduce function.

WWAN Reduced power level table

Reduced level	Receiver state	Transmitting conditions	Antenna	Power reduced bands
Level 1	On (head scenario)	WWAN Use Only	Up Ant.	GSM 850/1900; WCDMA Band2/4/5 LTE Band 2/4/5/7/26/38/41
Level 2	On (head scenario)	WWAN + WLAN 2.4G	Up Ant.	GSM 850/1900; WCDMA Band2/4/5 LTE Band 2/4/5/7/26/38/41
Level 3	On (head scenario)	WWAN + WLAN 5G	Up Ant.	GSM 850/1900; WCDMA Band2/4/5 LTE Band 2/4/5/7/26/38/41

WLAN Reduced power level table

Reduced level	Receiver state	Transmitting conditions	Antenna	Power reduced bands
Level 1	On (head scenario)	WLAN Use Only	WLAN Ant.	WLAN 5.6G
Level 2	On (head scenario)	WWAN + WLAN 2.4G or WWAN + WLAN 5G	WLAN Ant.	WLAN 2.4G or WLAN 5G

3 SUMMARY OF TEST RESULT

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	ANSI/IEEE Std. C95.1-1999	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz
3	IEEE Std. 1528-2013	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
4	FCC KDB 447498 D01 v06	Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies
5	FCC KDB 941225 D01 v03r01	3G SAR MEAUREMENT PROCEDURES
6	FCC KDB 941225 D05 v02r05	SAR Evaluation Considerations for LTE Devices
7	FCC KDB 941225 D06 v02r01	SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities
8	CC KDB 941225 D05A v01r02	Rel. 10 LTE SAR Test Guidance and KDB Inquiries
9	FCC KDB 865664 D01 v01r04	SAR Measurement 100 MHz to 6 GHz
10	FCC KDB 865664 D02 v01r02	RF Exposure Reporting
11	FCC KDB 648474 D04 v01r03	SAR Evaluation Considerations for Wireless Handsets
12	KDB 248227 D01 v02r02	SAR Guidance for IEEE 802.11 (Wi-Fi) Transmitters

3.2 Device Category and SAR Limit

This device belongs to portable device category because its radiating structure is allowed to be used within 20 centimeters of the body of the user.

Limit for General Population/Uncontrolled exposure should be applied for this device, it is 1.6 W/kg as averaged over any 1 gram of tissue.

Table of Exposure Limits:

Body Position	SAR Value (W/Kg)	
	General Population/ Uncontrolled Exposure	Occupational/ Controlled Exposure
Whole-Body SAR (averaged over the entire body)	0.08	0.4
Partial-Body SAR (averaged over any 1 gram of tissue)	1.60	8.0
SAR for hands, wrists, feet and ankles (averaged over any 10 grams of tissue)	4.0	20.0

NOTE:

General Population/Uncontrolled Exposure: Locations where there is the exposure of individuals who have no knowledge or control of their exposure. General population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

Occupational/Controlled Exposure: Locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

3.3 Test Result Summary

3.3.1 Highest Head and Body SAR (1 g Value)

Band	Maximum Scaled SAR (W/kg)			Maximum Report SAR (W/kg)		
	Head	Body-worn Accessory	Hotspot	Head	Body-worn Accessory	Hotspot
GSM 850	1.192	0.573	0.573	1.192	0.874	0.874
GSM 1900	1.156	0.335	0.335			
WCDMA Band 2	1.047	0.761	0.765			
WCDMA Band 4	1.032	0.478	0.715			
WCDMA Band 5	0.971	0.682	0.682			
LTE Band 2	0.796	0.468	0.646			
LTE Band 4	1.016	0.520	0.654			
LTE Band 5	0.683	0.520	0.546			
LTE Band 7	0.910	0.874	0.874			
LTE Band 26	0.842	0.520	0.520			
LTE Band 38	0.988	0.407	0.458			
LTE Band 41	1.063	0.432	0.665			
2.4G WLAN	0.975	0.220	0.270			
5.2G WLAN	/	/	0.406			
5.3G WLAN	0.760	0.158	/			
5.6G WLAN	0.744	0.348	/			
5.8G WLAN	0.720	0.130	0.226			
Bluetooth	0.208	0.048	0.067			
Limit (W/kg)	1.6					
Verdict	PASS					

3.3.2 Highest Specific SAR (10 g Value)

Band	Maximum Scaled SAR (W/kg)	Maximum Report SAR (W/kg)
	Specific 10g	
5.3G WLAN	0.659	0.849
5.6G WLAN	0.849	
Limit (W/kg)	4.0	4.0
Verdict	Pass	

3.3.3 Highest Simultaneous SAR

Position	Simultaneous Configuration	Simultaneous SAR (W/kg)	Limit (W/kg)	Verdict
Head (1g)	WWAN+5G WIFI +Bluetooth	1.441	1.6	Pass
Body-worn Accessory (1g)	WWAN+5G WIFI +Bluetooth	1.270	1.6	Pass
Hotspot (1g)	WWAN+5G WIFI +Bluetooth	1.168	1.6	Pass

3.4 Test Uncertainty

According to KDB 865664 D01, when the highest measured 1 g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis is not required in SAR reports submitted for equipment approval.

The maximum 1 g SAR for the EUT in this report is 1.192 W/kg, which is lower than 1.5 W/kg, so the extensive SAR measurement uncertainty analysis is not required in this report.

The maximum 10 g SAR for the EUT in this report is 0.849 W/kg, which is lower than 3.75 W/kg, so the extensive SAR measurement uncertainty analysis is not required in this report.

4 MEASUREMENT SYSTEM

4.1 Specific Absorption Rate (SAR) Definition

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$\mathbf{SAR} = \frac{d}{dt} \left(\frac{dW}{dm} \right) = \frac{d}{dt} \left(\frac{dW}{\rho dv} \right)$$

SAR is expressed in units of Watts per kilogram (W/kg) SAR measurement can be related to the electrical field in the tissue by

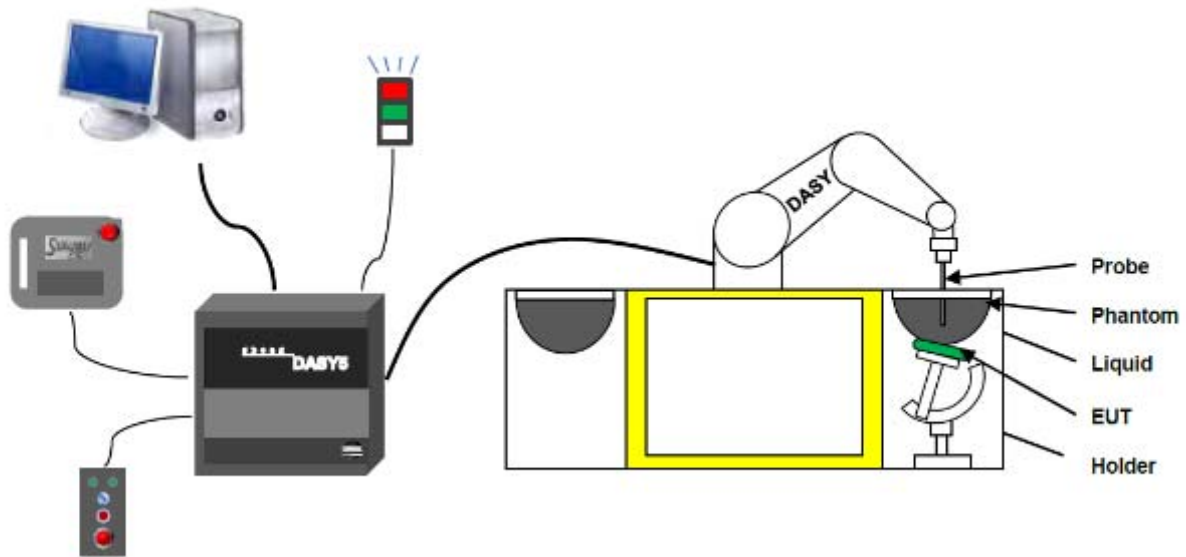
$$\mathbf{SAR} = \frac{\sigma E^2}{\rho}$$

Where: σ is the conductivity of the tissue,

ρ is the mass density of the tissue and E is the RMS electrical field strength.

4.2 DASY SAR System

4.2.1 DASY SAR System Diagram



The DASY5 system for performing compliance tests consists of the following items:

1. A standard high precision 6-axis robot (Stäubli RX family) with controller and software. An arm extension for accommodating the data acquisition electronics (DAE).
2. A dosimetric probe, i.e. an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
3. A data acquisition electronic (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
4. A unit to operate the optical surface detector which is connected to the EOC.
5. The Electro-Optical Coupler (EOC) performs the conversion from the optical into a digital electric signal of the DAE. The EOC is connected to the DASY5 measurement server.
6. The DASY5 measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation.
7. DASY5 software and SEMCAD data evaluation software.
8. Remote control with teach panel and additional circuitry for robot safety such as warning lamps, etc.
9. The generic twin phantom enabling the testing of left-hand and right-hand usage.
10. The device holder for handheld mobile phones.
11. Tissue simulating liquid mixed according to the given recipes.
12. System validation dipoles allowing to validate the proper functioning of the system.

4.2.2 Robot

The Dasy SAR system uses the high precision robots. Symmetrical design with triangular core Built-in optical fiber for surface detection system For the 6-axis controller system, Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents). The robot series have many features that are important for our application:



- High precision
(repeatability ± 0.02 mm)
- High reliability
(industrial design)
- Low maintenance costs
(virtually maintenance free due to direct drive gears; no belt drives)
- Jerk-free straight movements
(brush less synchron motors; no stepper motors)
- Low ELF interference
(motor control fields shielded via the closed metallic construction shields)

4.2.3 E-Field Probe

The probe is specially designed and calibrated for use in liquids with high permittivities for the measurements the Specific Dosimetric E-Field Probe EX3DV4-SN:7510 with following specifications is used.

Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection system Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycoether)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to 6 GHz; Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.2 dB in HSL (rotation around probe axis) ; ± 0.4 dB in HSL (rotation normal to probe axis)
Dynamic range	5 μ W/g to > 100 mW/g; Linearity: ± 0.2 dB
Dimensions	Overall length: 337 mm (Tip: 9 mm) Tip diameter: 2.5 mm (Body: 10 mm) Distance from probe tip to dipole centers: 1.0 mm
Application	General dosimetry up to 3 GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms (EX3DV4)

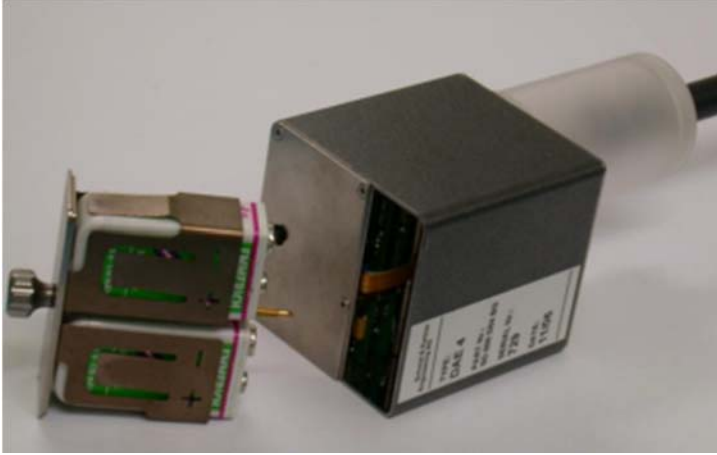


E-Field Probe Calibration Process

Probe calibration is realized, in compliance with CENELEC EN 62209-1/-2 and IEEE 1528 std, with CALISAR, Antennessa proprietary calibration system. The calibration is performed with the EN 62209-1/2 annexe technique using reference guide at the five frequencies.

4.2.4 Data Acquisition Electronics

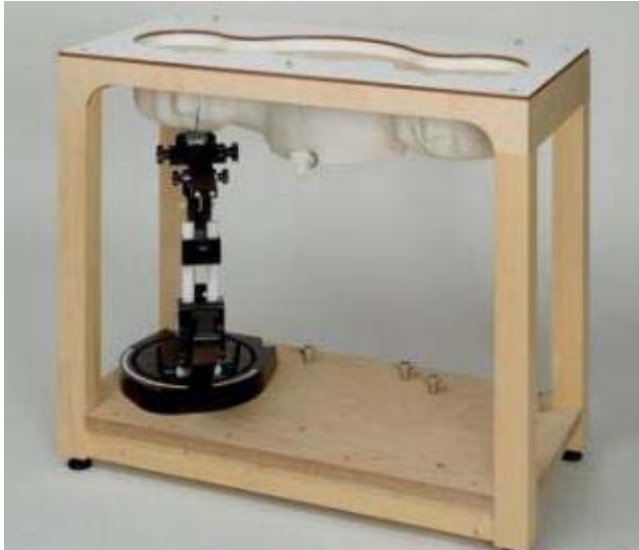
The data acquisition electronics (DAE) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converte and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information, as well as an optical uplink for commands and the clock.



- Input Impedance: 200M Ω
- The Inputs: Symmetrical and Floating
- Common Mode Rejection: Above 80dB

4.2.5 Phantoms

For the measurements the Specific Anthropomorphic Mannequin (SAM) defined by the IEEE SCC-34/SC2 group is used. The phantom is a polyurethane shell integrated in a wooden table. The thickness of the phantom amounts to 2mm +/- 0.2mm. It enables the dosimetric evaluation of left and right phone usage and includes an additional flat phantom part for the simplified performance check. The phantom set-up includes a cover, which prevents the evaporation of the liquid.



- Left hand
- Right hand
- Flat phantom

Photo of Phantom SN1857



Photo of Phantom SN1859



Serial Number	Material	Length	Height
SN 1857 SAM1	Vinylester, glass fiber reinforced	1000	500
SN 1859 SAM2	Vinylester, glass fiber reinforced	1000	500

4.2.6 Device Holder

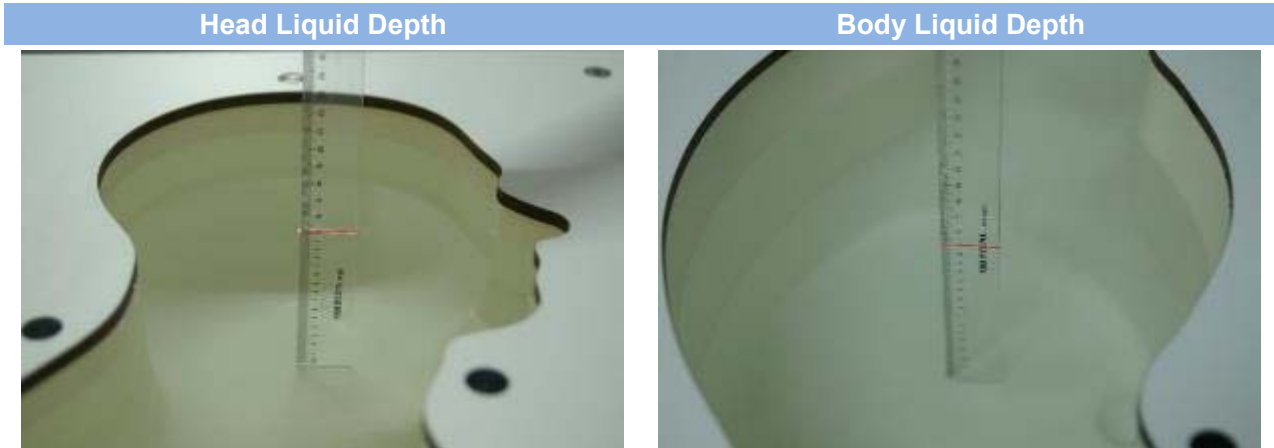
The DASY5 device holder has two scales for device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear openings). The plane between the ear openings and the mouth tip has a rotation angle of 65° . The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. This device holder is used for standard mobile phones or PDA"s only. If necessary an additional support of polystyrene material is used. Larger DUT"s (e.g. notebooks) cannot be tested using this device holder. Instead a support of bigger polystyrene cubes and thin polystyrene plates is used to position the DUT in all relevant positions to find and measure spots with maximum SAR values. Therefore those devices are normally only tested at the flat part of the SAM.



The positioning system allows obtaining cheek and tilting position with a very good accuracy. In compliance with CENELEC, the tilt angle uncertainty is lower than 1° .

4.2.7 Simulating Liquid

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. The nominal dielectric values of the tissue simulating liquids in the phantom and the tolerance of 5%.



The following table gives the recipes for tissue simulating liquid and the theoretical Conductivity/Permittivity.

Head (Reference IEEE1528)								
Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity σ (S/m)	Permittivity ϵ
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
900	40.3	57.9	0.2	1.4	0.2	0	0.97	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	1.4	40.0
2450	55.0	0	0	0.1	0	44.9	1.80	39.2
2600	54.9	0	0	0.1	0	45.0	1.96	39.0
Frequency (MHz)	Water (%)	Hexyl Carbitol (%)			Triton X-100 (%)		Conductivity σ (S/m)	Permittivity ϵ
5200	62.52	17.24			17.24		4.66	36.0
5800	62.52	17.24			17.24		5.27	35.3
Body (From instrument manufacturer)								
Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity σ (S/m)	Permittivity ϵ
750	51.7	47.2	0	0.9	0.1	0	0.96	55.5
835	50.8	48.2	0	0.9	0.1	0	0.97	55.2
900	50.8	48.2	0	0.9	0.1	0	1.05	55.0
1800, 1900, 2000	70.2	0	0	0.4	0	29.4	1.52	53.3
2450	68.6	0	0	0.1	0	31.3	1.95	52.7
2600	68.2	0	0	0.1	0	31.7	2.16	52.5
Frequency(MHz)	Water	DGBE (%)			Salt (%)		Conductivity σ (S/m)	Permittivity ϵ
5200	78.60	21.40			/		5.54	47.86
5800	78.50	21.40			0.1		6.0	48.20

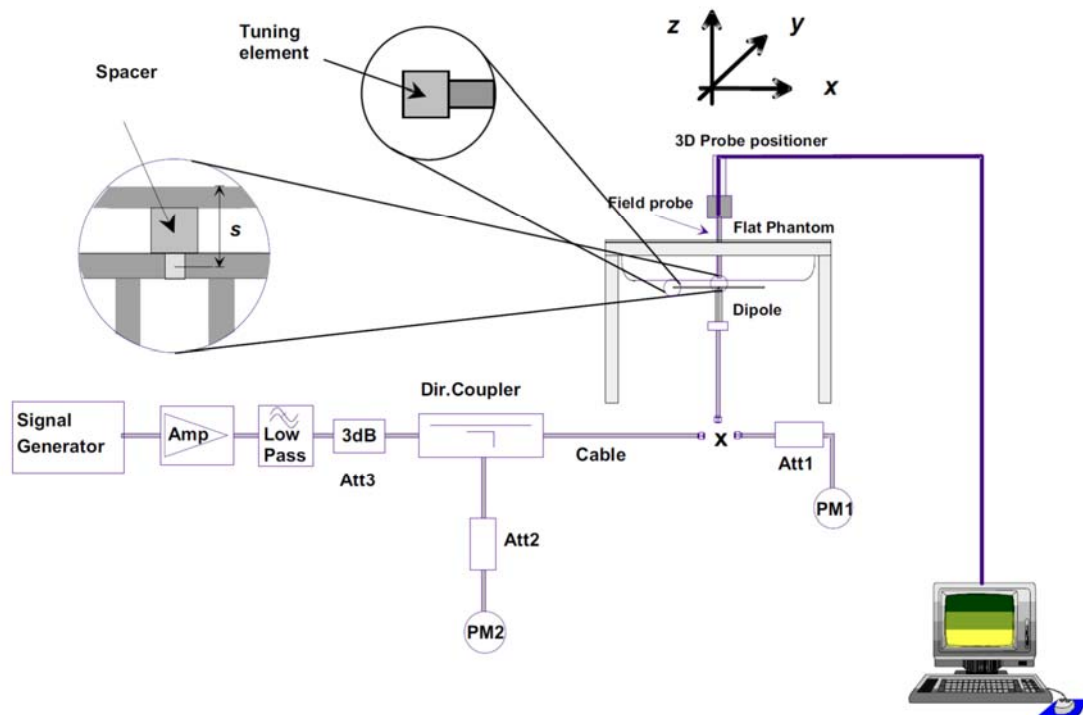
5 SYSTEM VERIFICATION

5.1 Purpose of System Check

The system performance check verifies that the system operates within its specifications. System and operator errors can be detected and corrected. It is recommended that the system performance check be performed prior to any usage of the system in order to guarantee reproducible results. The system performance check uses normal SAR measurements in a simplified setup with a well characterized source. This setup was selected to give a high sensitivity to all parameters that might fail or vary over time. The system check does not intend to replace the calibration of the components, but indicates situations where the system uncertainty is exceeded due to drift or failure.

5.2 System Check Setup

In the simplified setup for system evaluation, the EUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:



6 TEST POSITION CONFIGURATIONS

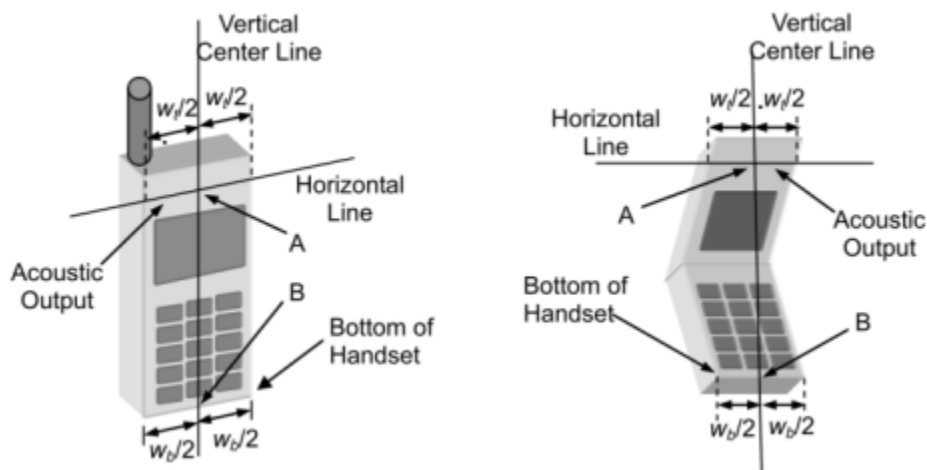
According to KDB 648474 D04 Handset, handsets are tested for SAR compliance in head, body-worn accessory and other use configurations described in the following subsections.

6.1 Head Exposure Conditions

Head exposure is limited to next to the ear voice mode operations. Head SAR compliance is tested according to the test positions defined in IEEE Std 1528-2013 using the SAM phantom illustrated as below.

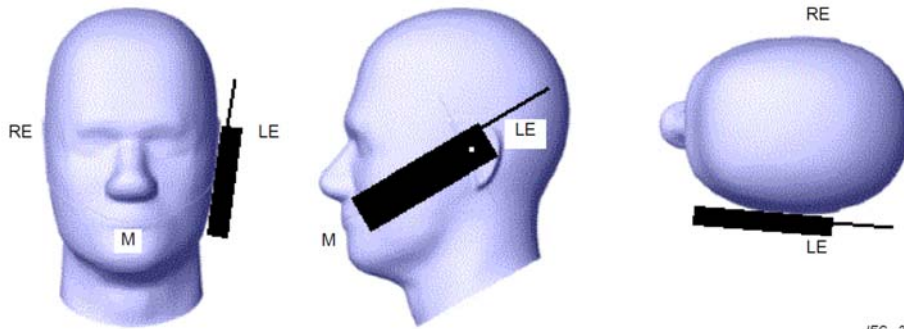
6.1.1 Two Imaginary Lines on the Handset

- The vertical center line passes through two points on the front side of the handset - the midpoint of the width w_t of the handset at the level of the acoustic output, and the midpoint of the width w_b of the bottom of the handset.
- The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output. The horizontal line is also tangential to the face of the handset at point A.
- The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical center line is not necessarily parallel to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.



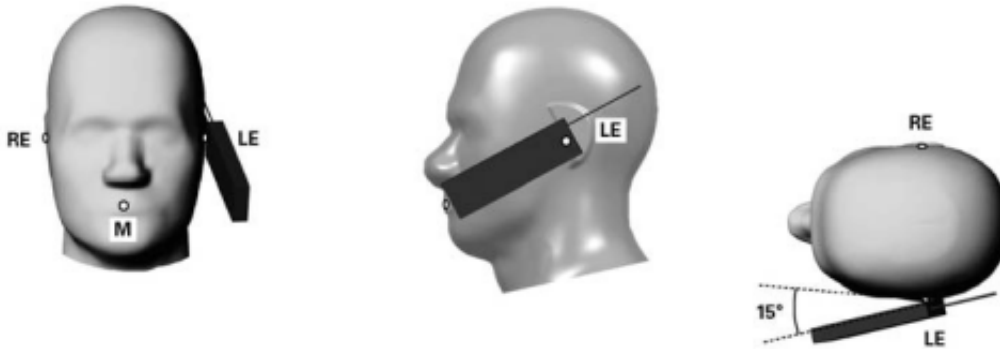
6.1.2 Cheek Position

- To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the three ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.
- To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost.



6.1.3 Tilted Position

- (a) To position the device in the “cheek” position described above.
- (b) While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost.

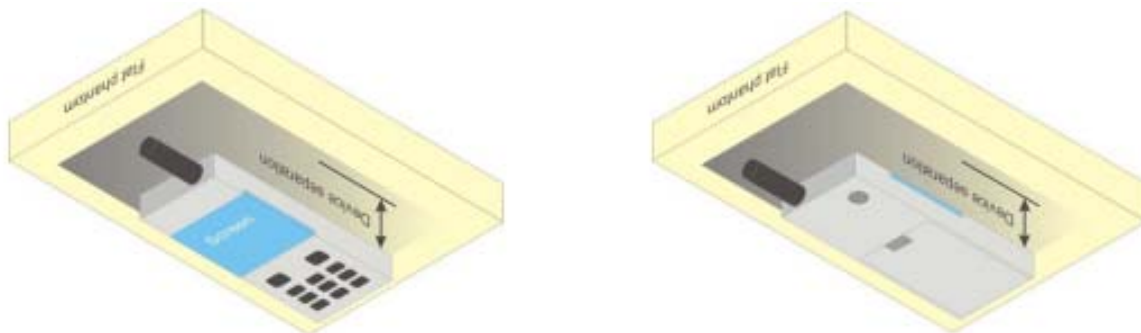


6.2 Body-worn Position Conditions

Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in KDB 447498 are used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode. When the reported SAR for a body-worn accessory.

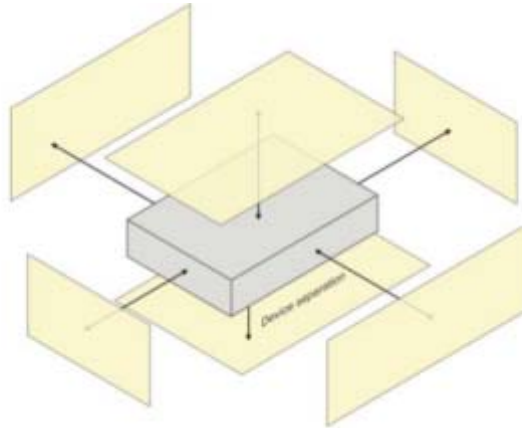
Body-worn accessories that do not contain metallic or conductive components may be tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics. All body-worn accessories containing metallic components are tested in conjunction with the host device.

Body-worn accessory SAR compliance is based on a single minimum test separation distance for all wireless and operating modes applicable to each body-worn accessory used by the host, and according to the relevant voice and/or data mode transmissions and operations. If a body-worn accessory supports voice only operations in its normal and expected use conditions, testing of data mode for body-worn compliance is not required. A conservative minimum test separation distance for supporting off-the-shelf body-worn accessories that may be acquired by users of consumer handsets is used to test for body-worn accessory SAR compliance. This distance is determined by the handset manufacturer, according to the requirements of Supplement C 01-01. Devices that are designed to operate on the body of users using lanyards and straps, or without requiring additional body-worn accessories, will be tested using a conservative minimum test separation distance ≤ 5 mm to support compliance.



6.3 Hotspot Mode Exposure Position Conditions

For handsets that support hotspot mode operations, with wireless router capabilities and various web browsing functions, the relevant hand and body exposure conditions are tested according to the hotspot SAR procedures in KDB 941225. A test separation distance of 10 mm is required between the phantom and all surfaces and edges with a transmitting antenna located within 25 mm from that surface or edge. When the form factor of a handset is smaller than 9 cm x 5 cm, a test separation distance of 5 mm (instead of 10 mm) is required for testing hotspot mode. When the separation distance required for body-worn accessory testing is larger than or equal to that tested for hotspot mode, in the same wireless mode and for the same surface of the phone, the hotspot mode SAR data may be used to support body-worn accessory SAR compliance for that particular configuration (surface).



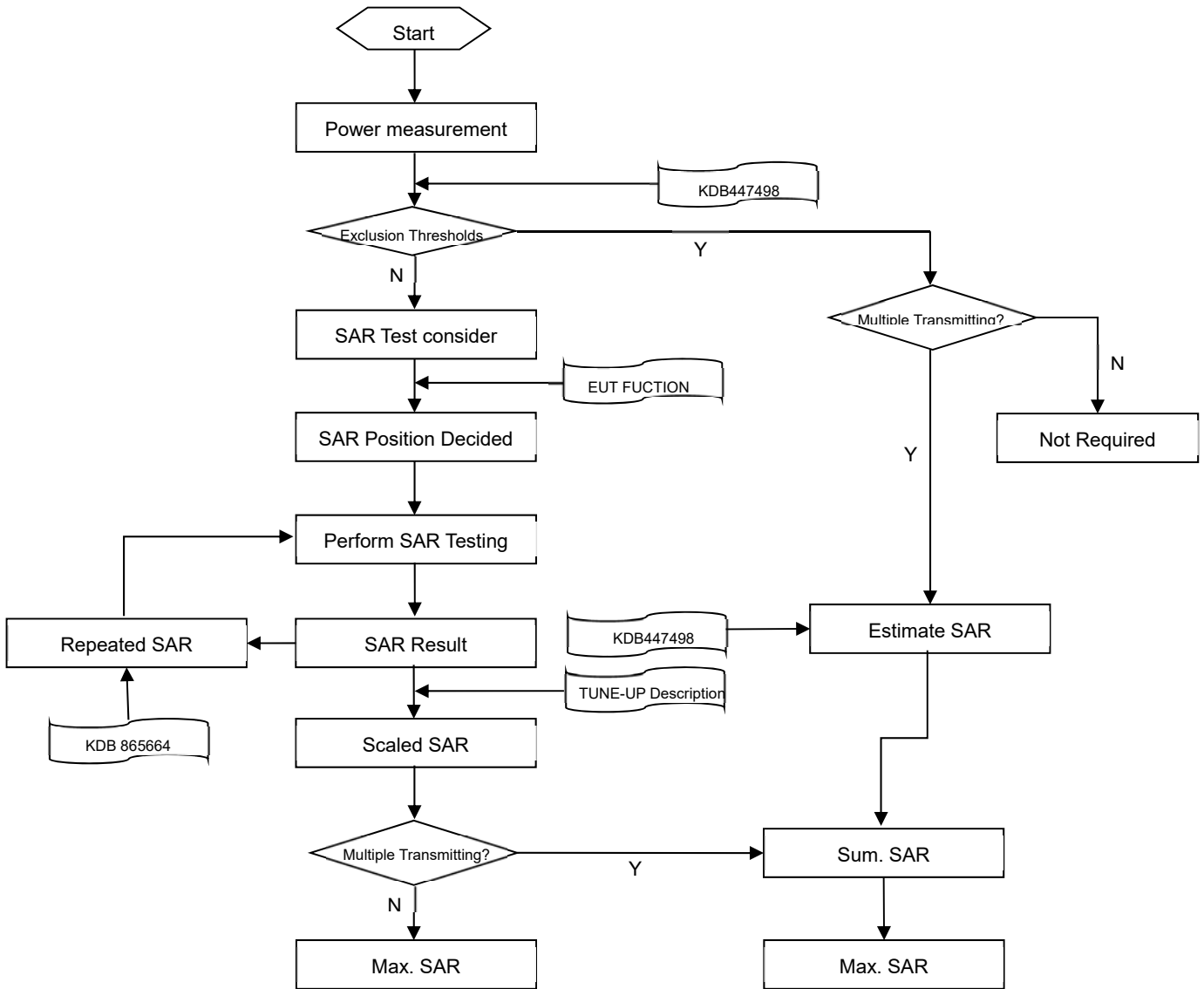
6.4 Product Specific 10g Exposure Consideration

According with FCC KDB 648474 D04, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, unless it is confirmed otherwise through KDB inquiries, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance;

The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg. For WWAN antenna, hotspot SAR results less than 1.2W/Kg, so WWAN 10-g extremity test are not require, only 5G WLAN Band II and Band III was tested 10-g extremity SAR in this report.

7 MEASUREMENT PROCEDURE

7.1 Measurement Process Diagram



7.2 SAR Scan General Requirement

Probe boundary effect error compensation is required for measurements with the probe tip closer than half a probe tip diameter to the phantom surface. Both the probe tip diameter and sensor offset distance must satisfy measurement protocols; to ensure probe boundary effect errors are minimized and the higher fields closest to the phantom surface can be correctly measured and extrapolated to the phantom surface for computing 1 g SAR. Tolerances of the post-processing algorithms must be verified by the test laboratory for the scan resolutions used in the SAR measurements, according to the reference distribution functions specified in IEEE Std 1528-2013.

		≤3GHz	>3GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface		5±1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location		30°±1°	20°±1°
Maximum area scan spatial resolution: Δx Area , Δy Area		≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3–4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
		When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx Zoom , Δy Zoom		≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3–4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: Δz Zoom (n)	≤ 5 mm	3–4 GHz: ≤ 4 mm
			4–5 GHz: ≤ 3 mm
	graded grid	Δz Zoom (1): between 1st two points closest to phantom surface Δz Zoom (n>1): between subsequent points	3–4 GHz: ≤ 3 mm
			4–5 GHz: ≤ 2.5 mm
			5–6 GHz: ≤ 2 mm
		≤ 1.5· Δz Zoom (n-1)	
Minimum zoom scan volume	x, y, z	≥30 mm	3–4 GHz: ≥ 28 mm
			4–5 GHz: ≥ 25 mm
			5–6 GHz: ≥ 22 mm
Note: 1. δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details. 2. * When zoom scan is required and the reported SAR from the area scan based 1 g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.			

7.3 Measurement Procedure

The following steps are used for each test position

- a. Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
- b. Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
- c. Measurement of the SAR distribution with a grid of 8 to 16mm * 8 to 16 mm and a constant distance to the inner surface of the phantom. Since the sensors cannot directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme.
- d. Around this point, a cube of 30 * 30 * 30 mm or 32 * 32 * 32 mm is assessed by measuring 5 or 8 * 5 or 8*4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

7.4 Area & Zoom Scan Procedure

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g. Area scan and zoom scan resolution setting follows KDB 865664 D01v01r04 quoted below.

When the 1 g SAR of the highest peak is within 2 dB of the SAR limit, additional zoom scans are required for other peaks within 2 dB of the highest peak that have not been included in any zoom scan to ensure there is no increase in SAR.

8 CONDUCTED RF OUTPUT POWER

8.1 GSM

GSM 850								
GSM850 Band	Burst Average Power(dBm)			Tune-up Limit (dBm)	Frame-Averaged power (dBm)			Tune-up Limit (dBm)
Channel	128	190	251		128	190	251	
GSM (GMSK, 1-Slot)	32.83	33.01	33.05	33.50	23.64	23.82	23.86	24.31
GPRS (GMSK, 1-Slot)	32.33	32.90	32.95	33.50	23.14	23.71	23.76	24.31
GPRS (GMSK, 2-Slots)	29.65	29.86	30.63	31.00	23.52	23.73	24.50	24.87
GPRS (GMSK, 3-Slots)	27.58	27.80	28.29	29.00	23.16	23.38	23.87	24.58
GPRS (GMSK, 4-Slots)	26.05	26.29	26.42	29.00	22.87	23.11	23.24	25.82
EGPRS (8PSK, 1-Slot)	29.78	30.14	30.06	29.00	20.59	20.95	20.87	19.81
EGPRS (8PSK, 2-Slots)	26.91	27.22	27.33	27.00	20.78	21.09	21.20	20.87
EGPRS (8PSK, 3-Slots)	25.64	25.89	26.01	26.00	21.22	21.47	21.59	21.58
EGPRS (8PSK, 4-Slots)	25.10	25.31	25.41	26.00	21.92	22.13	22.23	22.82
GSM 1900								
GSM1900 Band	Burst Average Power(dBm)			Tune-up Limit (dBm)	Frame-Averaged power(dBm)			Tune-up Limit (dBm)
Channel	512	661	810		512	661	810	
GSM (GMSK, 1-Slot)	29.18	29.33	29.21	30.50	19.99	20.14	20.02	21.31
GPRS (GMSK, 1-Slot)	29.67	29.50	29.46	30.50	20.48	20.31	20.27	21.31
GPRS (GMSK, 2-Slots)	26.18	26.27	26.24	27.00	20.05	20.14	20.11	20.87
GPRS (GMSK, 3-Slots)	24.27	24.31	24.17	25.00	19.85	19.89	19.75	20.58
GPRS (GMSK, 4-Slots)	22.69	22.77	22.80	23.50	19.51	19.59	19.62	20.32
EGPRS (8PSK, 1-Slot)	26.46	26.47	26.38	27.50	17.27	17.28	17.19	18.31
EGPRS (8PSK, 2-Slots)	23.20	23.26	23.21	24.50	17.07	17.13	17.08	18.37
EGPRS (8PSK, 3-Slots)	22.07	22.02	21.73	23.00	17.65	17.60	17.31	18.58
EGPRS (8PSK, 4-Slots)	20.57	20.50	20.40	21.50	17.39	17.32	17.22	18.32

Note 1: SAR testing was performed on the maximum frame-averaged power mode.

Note 2: The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum burst-averaged power based on time slots. The calculated method is shown as below:

Frame-averaged power = Burst averaged power (1 Tx Slot) – 9.19 dB

Frame-averaged power = Burst averaged power (2 Tx Slots) – 6.13 dB

Frame-averaged power = Burst averaged power (3 Tx Slots) - 4.42dB

Frame-averaged power = Burst averaged power (4 Tx Slots) – 3.18 dB

8.2 WCDMA

WCDMA	Band 2				Band 4			
Channel	9262	9400	9538	Tune-up Limit (dBm)	1312	1412	1513	Tune-up Limit (dBm)
RMC 12.2Kbps	23.80	23.84	23.79	24.50	23.76	23.91	23.95	24.50
HSDPA Subtest-1	22.80	22.83	22.82	23.50	22.76	22.92	22.94	23.50
HSDPA Subtest-2	22.84	22.87	22.84	23.50	22.77	22.94	22.95	23.50
HSDPA Subtest-3	22.37	22.39	22.33	23.00	22.30	22.44	22.47	23.00
HSDPA Subtest-4	22.35	22.38	22.33	23.00	22.32	22.44	22.48	23.00
HSUPA Subtest-1	22.83	22.77	22.77	23.50	22.78	22.90	22.82	23.50
HSUPA Subtest-2	20.74	20.87	20.70	21.50	20.80	20.92	20.90	21.50
HSUPA Subtest-3	21.80	21.90	21.71	22.50	21.76	21.89	21.95	22.50
HSUPA Subtest-4	20.81	20.87	20.78	21.50	20.79	20.89	20.87	21.50
HSUPA Subtest-5	22.80	22.90	22.76	23.50	22.81	22.87	22.92	23.50
WCDMA	Band 5				-			
Channel	4132	4182	4233	Tune-up Limit (dBm)	-	-	-	-
RMC 12.2Kbps	23.25	23.15	23.34	24.50				
HSDPA Subtest-1	22.58	22.38	22.65	23.50	-	-	-	-
HSDPA Subtest-2	22.52	22.39	22.69	23.50	-	-	-	-
HSDPA Subtest-3	21.98	21.90	22.21	23.00	-	-	-	-
HSDPA Subtest-4	22.05	21.90	22.20	23.00	-	-	-	-
HSUPA Subtest-1	22.60	22.48	22.73	23.50	-	-	-	-
HSUPA Subtest-2	20.63	20.41	20.76	21.50	-	-	-	-
HSUPA Subtest-3	21.64	21.47	21.75	22.50	-	-	-	-
HSUPA Subtest-4	20.66	20.45	20.67	21.50	-	-	-	-
HSUPA Subtest-5	22.66	22.51	22.63	23.50	-	-	-	-

8.3 LTE

FDD LTE Band 2									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	18700	18900	19100		18700	18900	19100	
20 MHz	1 (RB_Pos:0)	23.44	23.55	23.16	24.00	23.01	23.01	22.59	23.00
	1 (RB_Pos:50)	23.21	23.31	23.00	24.00	22.75	22.79	22.37	23.00
	1 (RB_Pos:99)	23.31	23.46	23.04	24.00	22.91	22.87	22.52	23.00
	50 (RB_Pos:0)	22.34	22.47	22.17	23.00	21.44	21.59	21.16	22.00
	50 (RB_Pos:25)	22.29	22.40	22.11	23.00	21.40	21.53	21.11	22.00
	50 (RB_Pos:50)	22.25	22.29	22.07	23.00	21.36	21.42	21.09	22.00
	100 (RB_Pos:0)	22.27	22.38	22.11	23.00	21.42	21.49	21.17	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	18675	18900	19125		18675	18900	19125	
15 MHz	1 (RB_Pos:0)	23.38	23.45	23.18	24.00	22.75	22.46	22.54	23.00
	1 (RB_Pos:38)	23.22	23.26	23.03	24.00	22.66	22.27	22.38	23.00
	1 (RB_Pos:74)	23.31	23.26	23.09	24.00	22.68	22.26	22.50	23.00
	36 (RB_Pos:0)	22.29	22.40	22.14	23.00	21.38	21.47	21.23	22.00
	36 (RB_Pos:20)	22.35	22.33	22.11	23.00	21.44	21.43	21.22	22.00
	36 (RB_Pos:39)	22.32	22.29	22.07	23.00	21.42	21.38	21.16	22.00
	75 (RB_Pos:0)	22.39	22.35	22.12	23.00	21.45	21.43	21.18	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	18650	18900	19150		18650	18900	19150	
10 MHz	1 (RB_Pos:0)	23.52	23.62	23.24	24.00	22.43	22.98	22.19	23.00
	1 (RB_Pos:25)	23.18	23.28	23.22	24.00	22.17	22.78	22.23	23.00
	1 (RB_Pos:49)	23.46	23.42	23.18	24.00	22.43	22.87	22.22	23.00
	25 (RB_Pos:0)	22.28	22.35	22.19	23.00	21.38	21.50	21.30	22.00
	25 (RB_Pos:12)	22.26	22.35	22.17	23.00	21.34	21.48	21.30	22.00
	25 (RB_Pos:25)	22.34	22.33	22.21	23.00	21.41	21.46	21.38	22.00
	50 (RB_Pos:0)	22.36	22.33	22.14	23.00	21.44	21.43	21.26	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	18625	18900	19175		18625	18900	19175	
5 MHz	1 (RB_Pos:0)	23.24	23.36	23.24	24.00	22.47	22.94	22.35	23.00
	1 (RB_Pos:13)	23.27	23.37	23.25	24.00	22.51	22.98	22.39	23.00
	1 (RB_Pos:24)	23.21	23.32	23.18	24.00	22.48	22.89	22.32	23.00
	12 (RB_Pos:0)	22.26	22.33	22.25	23.00	21.45	21.55	21.34	22.00
	12 (RB_Pos:6)	22.24	22.31	22.25	23.00	21.39	21.56	21.36	22.00
	12 (RB_Pos:13)	22.21	22.28	22.19	23.00	21.38	21.52	21.35	22.00

	25 (RB_Pos:0)	22.27	22.29	22.20	23.00	21.39	21.45	21.26	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	18615	18900	19185		18615	18900	19185	
3.0 MHz	1 (RB_Pos:0)	23.19	23.29	23.21	24.00	22.15	22.74	22.29	23.00
	1 (RB_Pos:8)	23.15	23.28	23.20	24.00	22.15	22.72	22.21	23.00
	1 (RB_Pos:14)	23.13	23.25	23.16	24.00	22.12	22.73	22.20	23.00
	8 (RB_Pos:0)	22.23	22.29	22.19	23.00	21.41	21.45	21.35	22.00
	8 (RB_Pos:3)	22.21	22.29	22.18	23.00	21.38	21.45	21.35	22.00
	8 (RB_Pos:7)	22.22	22.28	22.18	23.00	21.37	21.43	21.30	22.00
	15 (RB_Pos:0)	22.19	22.27	22.22	23.00	21.31	21.40	21.24	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	18607	18900	19193		18607	18900	19193	
1.4 MHz	1 (RB_Pos:0)	23.16	23.18	23.09	24.00	22.29	22.65	22.13	23.00
	1 (RB_Pos:3)	23.19	23.32	23.16	24.00	22.37	22.73	22.25	23.00
	1 (RB_Pos:5)	23.14	23.17	23.12	24.00	22.28	22.66	22.17	23.00
	3 (RB_Pos:0)	23.15	23.22	23.15	24.00	22.23	22.50	22.35	23.00
	3 (RB_Pos:1)	23.19	23.28	23.22	24.00	22.33	22.58	22.41	23.00
	3 (RB_Pos:3)	23.13	23.20	23.13	24.00	22.27	22.47	22.34	23.00
	6 (RB_Pos:0)	22.11	22.18	22.07	23.00	21.34	21.20	21.32	22.00

FDD LTE Band 4									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20050	20175	20300		20050	20175	20300	
20 MHz	1 (RB_Pos:0)	23.22	23.32	23.31	24.00	22.74	22.77	22.74	23.00
	1 (RB_Pos:50)	23.02	23.14	23.24	24.00	22.57	22.59	22.68	23.00
	1 (RB_Pos:99)	23.11	23.25	23.17	24.00	22.68	22.62	22.66	23.00
	50 (RB_Pos:0)	22.19	22.28	22.30	23.00	21.28	21.34	21.36	22.00
	50 (RB_Pos:25)	22.21	22.19	22.35	23.00	21.32	21.27	21.42	22.00
	50 (RB_Pos:50)	22.16	22.14	22.30	23.00	21.25	21.25	21.38	22.00
	100 (RB_Pos:0)	22.19	22.20	22.25	23.00	21.33	21.28	21.33	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20025	20175	20325		20025	20175	20325	
15 MHz	1 (RB_Pos:0)	23.17	23.29	23.45	24.00	22.12	22.69	22.83	23.00
	1 (RB_Pos:38)	22.97	23.12	23.26	24.00	21.94	22.55	22.68	23.00
	1 (RB_Pos:74)	23.08	23.10	23.23	24.00	22.09	22.53	22.68	23.00
	36 (RB_Pos:0)	22.13	22.21	22.39	23.00	21.21	21.35	21.42	22.00

	36 (RB_Pos:20)	22.07	22.16	22.29	23.00	21.16	21.30	21.37	22.00
	36 (RB_Pos:39)	22.16	22.14	22.30	23.00	21.25	21.29	21.34	22.00
	75 (RB_Pos:0)	22.17	22.19	22.34	23.00	21.28	21.33	21.45	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20000	20175	20350		20000	20175	20350	
10 MHz	1 (RB_Pos:0)	23.06	23.18	23.35	24.00	22.03	22.58	22.41	23.00
	1 (RB_Pos:25)	23.00	23.10	23.22	24.00	21.97	22.55	22.29	23.00
	1 (RB_Pos:49)	22.96	23.08	23.18	24.00	21.94	22.53	22.28	23.00
	25 (RB_Pos:0)	22.07	22.22	22.30	23.00	21.16	21.33	21.46	22.00
	25 (RB_Pos:12)	22.07	22.18	22.26	23.00	21.13	21.28	21.43	22.00
	25 (RB_Pos:25)	22.07	22.16	22.25	23.00	21.14	21.27	21.42	22.00
	50 (RB_Pos:0)	22.03	22.14	22.28	23.00	21.10	21.24	21.37	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	19975	20175	20375		19975	20175	20375	
5 MHz	1 (RB_Pos:0)	23.02	23.17	23.27	24.00	22.25	22.75	22.46	23.00
	1 (RB_Pos:13)	23.05	23.23	23.29	24.00	22.27	22.80	22.45	23.00
	1 (RB_Pos:24)	22.98	23.16	23.23	24.00	22.23	22.73	22.43	23.00
	12 (RB_Pos:0)	22.06	22.17	22.27	23.00	21.21	21.36	21.41	22.00
	12 (RB_Pos:6)	22.05	22.18	22.29	23.00	21.24	21.37	21.44	22.00
	12 (RB_Pos:13)	22.02	22.14	22.19	23.00	21.19	21.35	21.38	22.00
	25 (RB_Pos:0)	22.03	22.10	22.26	23.00	21.14	21.26	21.31	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	19965	20175	20385		19965	20175	20385	
3.0 MHz	1 (RB_Pos:0)	23.03	23.16	23.21	24.00	21.96	22.58	22.37	23.00
	1 (RB_Pos:8)	22.97	23.12	23.23	24.00	21.94	22.56	22.31	23.00
	1 (RB_Pos:14)	22.95	23.13	23.20	24.00	21.91	22.51	22.27	23.00
	8 (RB_Pos:0)	22.02	22.16	22.24	23.00	21.19	21.28	21.37	22.00
	8 (RB_Pos:3)	22.06	22.18	22.25	23.00	21.23	21.28	21.34	22.00
	8 (RB_Pos:7)	22.01	22.14	22.23	23.00	21.18	21.19	21.32	22.00
	15 (RB_Pos:0)	22.05	22.11	22.23	23.00	21.16	21.24	21.28	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	19957	20175	20393		19957	20175	20393	
1.4 MHz	1 (RB_Pos:0)	22.92	23.04	23.13	24.00	22.06	22.52	22.26	23.00
	1 (RB_Pos:3)	22.97	23.14	23.21	24.00	22.15	22.56	22.32	23.00
	1 (RB_Pos:5)	22.95	23.08	23.13	24.00	22.11	22.49	22.24	23.00
	3 (RB_Pos:0)	22.97	23.07	23.26	24.00	22.09	22.36	22.46	23.00
	3 (RB_Pos:1)	23.03	23.16	23.32	24.00	22.15	22.44	22.50	23.00

	3 (RB_Pos:3)	22.92	23.08	23.24	24.00	22.08	22.35	22.46	23.00
	6 (RB_Pos:0)	21.93	22.08	22.12	23.00	21.13	21.03	21.42	22.00

FDD LTE Band 5									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20450	20525	20600		20450	20525	20600	
10 MHz	1 (RB_Pos:0)	23.16	23.22	23.27	24.50	22.06	22.45	22.23	23.50
	1 (RB_Pos:25)	23.21	23.09	23.17	24.50	22.14	22.44	22.14	23.50
	1 (RB_Pos:49)	23.20	23.01	23.18	24.50	22.05	22.41	22.18	23.50
	25 (RB_Pos:0)	22.21	22.17	22.20	23.50	21.14	21.30	21.31	22.50
	25 (RB_Pos:12)	22.27	22.17	22.21	23.50	21.19	21.29	21.33	22.50
	25 (RB_Pos:25)	22.22	22.12	22.15	23.50	21.26	21.19	21.26	22.50
	50 (RB_Pos:0)	22.21	22.18	22.17	23.50	21.27	21.21	21.25	22.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20425	20525	20625		20425	20525	20625	
5MHz	1 (RB_Pos:0)	23.16	23.27	23.17	24.50	22.39	22.81	22.24	23.50
	1 (RB_Pos:13)	23.21	23.17	23.25	24.50	22.40	22.75	22.41	23.50
	1 (RB_Pos:24)	23.06	23.22	23.18	24.50	22.32	22.72	22.34	23.50
	12 (RB_Pos:0)	22.20	22.25	22.16	23.50	21.27	21.45	21.25	22.50
	12 (RB_Pos:6)	22.15	22.26	22.28	23.50	21.28	21.42	21.36	22.50
	12 (RB_Pos:13)	22.10	22.23	22.24	23.50	21.27	21.39	21.36	22.50
	25 (RB_Pos:0)	22.13	22.21	22.10	23.50	21.27	21.37	21.12	22.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20415	20525	20635		20415	20525	20635	
3.0 MHz	1 (RB_Pos:0)	23.16	23.25	23.27	24.50	22.10	22.65	22.27	23.50
	1 (RB_Pos:8)	23.10	23.10	23.22	24.50	22.04	22.52	22.21	23.50
	1 (RB_Pos:14)	23.10	23.20	23.22	24.50	21.99	22.57	22.23	23.50
	8 (RB_Pos:0)	22.14	22.23	22.22	23.50	21.32	21.32	21.33	22.50
	8 (RB_Pos:3)	22.18	22.16	22.23	23.50	21.33	21.29	21.36	22.50
	8 (RB_Pos:7)	22.12	22.20	22.20	23.50	21.28	21.32	21.31	22.50
	15 (RB_Pos:0)	22.11	22.24	22.26	23.50	21.24	21.33	21.25	22.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20407	20525	20643		20407	20525	20643	
1.4MHz	1 (RB_Pos:0)	23.03	23.08	23.14	24.50	22.19	22.48	22.16	23.50
	1 (RB_Pos:3)	23.09	23.09	23.17	24.50	22.26	22.48	22.20	23.50
	1 (RB_Pos:5)	23.04	23.06	23.13	24.50	22.17	22.43	22.15	23.50

	3 (RB_Pos:0)	23.04	23.02	23.14	24.50	22.16	22.28	22.35	23.50
	3 (RB_Pos:1)	23.14	23.13	23.19	24.50	22.24	22.33	22.41	23.50
	3 (RB_Pos:3)	23.01	23.04	23.13	24.50	22.15	22.24	22.28	23.50
	6 (RB_Pos:0)	22.08	22.10	22.10	23.50	21.27	21.03	21.37	22.50

FDD LTE Band 7									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20850	21100	21350		20850	21100	21350	
20MHz	1 (RB_Pos:0)	23.15	23.40	23.25	24.00	22.80	22.92	22.66	23.00
	1 (RB_Pos:50)	23.08	23.28	23.15	24.00	22.72	22.82	22.53	23.00
	1 (RB_Pos:99)	23.00	23.19	23.13	24.00	22.65	22.71	22.58	23.00
	50 (RB_Pos:0)	22.24	22.41	22.28	23.00	21.40	21.55	21.36	22.00
	50 (RB_Pos:25)	22.20	22.27	22.19	23.00	21.36	21.43	21.27	22.00
	50 (RB_Pos:50)	22.14	22.26	22.13	23.00	21.27	21.36	21.35	22.00
	100 (RB_Pos:0)	22.18	22.29	22.19	23.00	21.34	21.41	21.41	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20825	21100	21375		20825	21100	21375	
15MHz	1 (RB_Pos:0)	23.12	23.37	23.30	24.00	22.16	22.86	22.73	23.00
	1 (RB_Pos:38)	23.11	23.24	23.33	24.00	22.13	22.76	22.73	23.00
	1 (RB_Pos:74)	23.04	23.12	23.29	24.00	22.02	22.62	22.70	23.00
	36 (RB_Pos:0)	22.14	22.36	22.35	23.00	21.21	21.57	21.34	22.00
	36 (RB_Pos:20)	22.18	22.26	22.27	23.00	21.31	21.41	21.35	22.00
	36 (RB_Pos:39)	22.10	22.21	22.34	23.00	21.20	21.35	21.40	22.00
	75 (RB_Pos:0)	22.16	22.22	22.26	23.00	21.31	21.36	21.40	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20800	21100	21400		20800	21100	21400	
10MHz	1 (RB_Pos:0)	23.06	23.32	23.30	24.00	22.09	22.78	22.30	23.00
	1 (RB_Pos:25)	22.93	23.22	23.31	24.00	22.01	22.75	22.36	23.00
	1 (RB_Pos:49)	23.01	23.12	23.28	24.00	22.00	22.61	22.27	23.00
	25 (RB_Pos:0)	22.11	22.40	22.30	23.00	21.21	21.55	21.48	22.00
	25 (RB_Pos:12)	22.05	22.39	22.41	23.00	21.24	21.51	21.52	22.00
	25 (RB_Pos:25)	22.12	22.27	22.33	23.00	21.28	21.39	21.54	22.00
	50 (RB_Pos:0)	22.18	22.29	22.27	23.00	21.28	21.39	21.42	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20775	21100	21425		20775	21100	21425	
5MHz	1 (RB_Pos:0)	23.03	23.32	23.31	24.00	22.28	22.89	22.45	23.00

	1 (RB_Pos:13)	23.07	23.35	23.37	24.00	22.33	23.00	22.49	23.00
	1 (RB_Pos:24)	22.98	23.25	23.24	24.00	22.29	22.90	22.40	23.00
	12 (RB_Pos:0)	22.11	22.35	22.36	23.00	21.31	21.62	21.53	22.00
	12 (RB_Pos:6)	22.08	22.36	22.38	23.00	21.30	21.63	21.53	22.00
	12 (RB_Pos:13)	22.03	22.33	22.31	23.00	21.28	21.60	21.48	22.00
	25 (RB_Pos:0)	22.10	22.33	22.32	23.00	21.23	21.53	21.40	22.00

TDD LTE Band 26									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	26765	26865	26965		26765	26865	26965	
15MHz	1 (RB_Pos:0)	23.40	23.31	23.54	24.50	22.37	22.76	22.96	23.50
	1 (RB_Pos:50)	23.28	23.33	23.44	24.50	22.29	22.79	22.82	23.50
	1 (RB_Pos:99)	23.28	23.35	23.37	24.50	22.28	22.73	22.73	23.50
	50 (RB_Pos:0)	22.37	22.35	22.47	23.50	21.44	21.54	21.55	22.50
	50 (RB_Pos:25)	22.37	22.46	22.46	23.50	21.41	21.58	21.49	22.50
	50 (RB_Pos:50)	22.37	22.39	22.41	23.50	21.48	21.52	21.44	22.50
	100 (RB_Pos:0)	22.40	22.42	22.42	23.50	21.51	21.54	21.54	22.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	26740	26865	26990		26740	26865	26990	
10MHz	1 (RB_Pos:0)	23.41	23.40	23.50	24.50	22.37	22.82	22.54	23.50
	1 (RB_Pos:38)	23.31	23.35	23.43	24.50	22.31	22.78	22.43	23.50
	1 (RB_Pos:74)	23.25	23.34	23.37	24.50	22.25	22.78	22.36	23.50
	36 (RB_Pos:0)	22.44	22.43	22.48	23.50	21.46	21.47	21.60	22.50
	36 (RB_Pos:20)	22.37	22.51	22.48	23.50	21.48	21.60	21.59	22.50
	36 (RB_Pos:39)	22.37	22.41	22.43	23.50	21.39	21.55	21.53	22.50
	75 (RB_Pos:0)	22.39	22.46	22.45	23.50	21.41	21.52	21.52	22.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	26715	26865	27015		26715	26865	27015	
5MHz	1 (RB_Pos:0)	23.38	23.40	23.40	24.50	22.61	22.94	22.50	23.50
	1 (RB_Pos:25)	23.41	23.43	23.43	24.50	22.67	23.00	22.59	23.50
	1 (RB_Pos:49)	23.28	23.41	23.37	24.50	22.57	22.98	22.48	23.50
	25 (RB_Pos:0)	22.40	22.38	22.46	23.50	21.55	21.59	21.55	22.50
	25 (RB_Pos:12)	22.44	22.48	22.44	23.50	21.53	21.67	21.54	22.50
	25 (RB_Pos:25)	22.39	22.43	22.37	23.50	21.49	21.67	21.50	22.50
	50 (RB_Pos:0)	22.37	22.46	22.39	23.50	21.50	21.56	21.45	22.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	26705	26865	27025		26705	26865	27025	

					(dBm)				(dBm)
3MHz	1 (RB_Pos:0)	23.39	23.39	23.42	24.50	22.33	22.81	22.46	23.50
	1 (RB_Pos:13)	23.38	23.35	23.38	24.50	22.33	22.74	22.37	23.50
	1 (RB_Pos:24)	23.33	23.43	23.40	24.50	22.31	22.86	22.41	23.50
	12 (RB_Pos:0)	22.38	22.38	22.36	23.50	21.57	21.48	21.45	22.50
	12 (RB_Pos:6)	22.47	22.39	22.42	23.50	21.58	21.51	21.50	22.50
	12 (RB_Pos:13)	22.41	22.45	22.35	23.50	21.56	21.56	21.43	22.50
	25 (RB_Pos:0)	22.39	22.45	22.39	23.50	21.52	21.53	21.41	22.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	26697	26865	27033		26697	26865	27033	
1.4MHz	1 (RB_Pos:0)	23.34	23.28	23.28	24.50	22.48	22.66	22.31	23.50
	1 (RB_Pos:13)	23.35	23.32	23.37	24.50	22.53	22.76	22.36	23.50
	1 (RB_Pos:24)	23.31	23.25	23.29	24.50	22.46	22.71	22.32	23.50
	12 (RB_Pos:0)	23.29	23.27	23.30	24.50	22.40	22.52	22.48	23.50
	12 (RB_Pos:6)	23.38	23.34	23.39	24.50	22.44	22.58	22.56	23.50
	12 (RB_Pos:13)	23.31	23.25	23.31	24.50	22.41	22.52	22.46	23.50
	25 (RB_Pos:0)	22.33	22.28	22.26	23.50	21.50	21.28	21.53	22.50

TDD LTE Band 38									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37850	38000	38150		37850	38000	38150	
20MHz	1 (RB_Pos:0)	23.30	23.30	23.62	24.00	22.67	22.60	23.02	23.00
	1 (RB_Pos:50)	23.17	23.15	23.53	24.00	22.52	22.42	22.92	23.00
	1 (RB_Pos:99)	23.02	23.06	23.42	24.00	22.42	22.40	22.86	23.00
	50 (RB_Pos:0)	22.28	22.28	22.47	23.00	21.37	21.35	21.58	22.00
	50 (RB_Pos:25)	22.21	22.30	22.41	23.00	21.32	21.40	21.54	22.00
	50 (RB_Pos:50)	22.12	22.21	22.45	23.00	21.20	21.30	21.54	22.00
	100 (RB_Pos:0)	22.22	22.29	22.35	23.00	21.28	21.39	21.47	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37825	38000	38175		37825	38000	38175	
15MHz	1 (RB_Pos:0)	23.25	23.33	23.52	24.00	22.64	22.82	22.88	23.00
	1 (RB_Pos:38)	23.15	23.14	23.52	24.00	22.52	22.64	22.84	23.00
	1 (RB_Pos:74)	23.03	23.12	23.40	24.00	22.42	22.68	22.73	23.00
	36 (RB_Pos:0)	22.26	22.23	22.44	23.00	21.31	21.32	21.56	22.00
	36 (RB_Pos:20)	22.21	22.28	22.49	23.00	21.32	21.37	21.62	22.00
	36 (RB_Pos:39)	22.14	22.20	22.42	23.00	21.21	21.29	21.52	22.00
	75 (RB_Pos:0)	22.19	22.30	22.37	23.00	21.29	21.40	21.48	22.00
Bandwidth	RB Set	Power (dBm)							

(MHz)	Channel	QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
		37800	38000	38200		37800	38000	38200	
10MHz	1 (RB_Pos:0)	23.19	23.25	23.57	24.00	22.54	22.76	22.98	23.00
	1 (RB_Pos:25)	23.17	23.15	23.48	24.00	22.55	22.65	22.89	23.00
	1 (RB_Pos:49)	23.09	23.19	23.42	24.00	22.48	22.66	22.88	23.00
	25 (RB_Pos:0)	22.27	22.21	22.52	23.00	21.32	21.28	21.61	22.00
	25 (RB_Pos:12)	22.22	22.21	22.50	23.00	21.35	21.27	21.59	22.00
	25 (RB_Pos:25)	22.15	22.26	22.44	23.00	21.26	21.34	21.54	22.00
	50 (RB_Pos:0)	22.21	22.26	22.46	23.00	21.30	21.37	21.57	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
Channel	37775	38000	38225	37775		38000	38225		
5MHz	1 (RB_Pos:0)	23.18	23.22	23.52	24.00	22.57	22.50	22.87	23.00
	1 (RB_Pos:13)	23.20	23.23	23.51	24.00	22.58	22.59	22.93	23.00
	1 (RB_Pos:24)	23.14	23.12	23.44	24.00	22.46	22.40	22.82	23.00
	12 (RB_Pos:0)	22.22	22.18	22.47	23.00	21.38	21.25	21.63	22.00
	12 (RB_Pos:6)	22.17	22.21	22.46	23.00	21.43	21.21	21.58	22.00
	12 (RB_Pos:13)	22.16	22.17	22.47	23.00	21.38	21.22	21.56	22.00
	25 (RB_Pos:0)	22.16	22.13	22.43	23.00	21.29	21.26	21.53	22.00

TDD LTE Band 41													
Bandwidth (MHz)	RB Set	Power (dBm)											
		QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
		Channel	39750	40185	40620	41055		41490	39750	40185	40620	41055	
20MHz	1 (RB_Pos:0)	22.04	23.66	23.65	23.85	23.79	24.50	21.43	22.93	23.12	23.24	23.00	23.50
	1 (RB_Pos:50)	22.00	23.54	23.59	23.89	23.65	24.50	21.44	22.86	22.96	23.20	22.87	23.50
	1 (RB_Pos:99)	21.87	23.48	23.45	23.83	23.71	24.50	21.34	22.80	22.87	23.12	22.96	23.50
	50 (RB_Pos:0)	21.12	22.70	22.55	22.83	22.78	23.50	20.24	21.85	21.74	21.89	21.87	22.50
	50 (RB_Pos:25)	21.07	22.65	22.59	22.81	22.75	23.50	20.21	21.78	21.69	21.84	21.83	22.50
	50 (RB_Pos:50)	20.96	22.59	22.50	22.84	22.67	23.50	20.12	21.73	21.60	21.87	21.78	22.50
	100 (RB_Pos:0)	21.04	22.65	22.46	22.78	22.71	23.50	20.17	21.82	21.54	21.84	21.80	22.50
Bandwidth (MHz)	RB Set	Power (dBm)											
		QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
		Channel	39725	40160	40620	41080		41515	39725	40160	40620	41080	
15MHz	1 (RB_Pos:0)	21.99	23.66	23.69	23.78	23.80	24.50	21.41	23.21	23.00	23.14	23.30	23.50
	1 (RB_Pos:50)	21.95	23.59	23.55	23.81	23.74	24.50	21.39	23.13	22.88	23.10	23.18	23.50
	1 (RB_Pos:99)	21.90	23.58	23.45	23.76	23.76	24.50	21.31	23.09	22.77	23.09	23.26	23.50
	50 (RB_Pos:0)	20.96	22.65	22.62	22.83	22.75	23.50	20.09	21.79	21.75	21.88	21.82	22.50

	50 (RB_Pos:25)	21.04	22.61	22.57	22.89	22.75	23.50	20.14	21.73	21.73	21.94	21.77	22.50
	50 (RB_Pos:50)	20.95	22.63	22.52	22.86	22.66	23.50	20.06	21.71	21.60	21.92	21.73	22.50
	100 (RB_Pos:0)	21.03	22.66	22.62	22.83	22.70	23.50	20.13	21.75	21.63	21.86	21.80	22.50
Bandwidth (MHz)	RB Set	Power (dBm)											
		QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
	Channel	39700	40135	40620	41105	41540		39700	40135	40620	41105	41540	
10MHz	1 (RB_Pos:0)	22.05	23.68	23.68	23.82	23.92	24.50	21.44	23.17	23.01	23.11	23.37	23.50
	1 (RB_Pos:50)	22.02	23.61	23.57	23.81	23.92	24.50	21.40	23.14	22.95	23.12	23.39	23.50
	1 (RB_Pos:99)	22.04	23.58	23.49	23.77	23.91	24.50	21.49	23.14	22.88	23.11	23.37	23.50
	50 (RB_Pos:0)	21.12	22.72	22.60	22.91	22.87	23.50	20.25	21.83	21.69	21.96	21.93	22.50
	50 (RB_Pos:25)	21.06	22.71	22.59	22.91	22.82	23.50	20.19	21.79	21.65	21.95	21.96	22.50
	50 (RB_Pos:50)	21.15	22.66	22.54	22.85	22.89	23.50	20.28	21.78	21.57	21.89	21.94	22.50
	100 (RB_Pos:0)	21.17	22.67	22.55	22.89	22.81	23.50	20.33	21.85	21.68	21.91	21.98	22.50
Bandwidth (MHz)	RB Set	Power (dBm)											
		QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
	Channel	39675	40110	40620	41130	41565		39675	40110	40620	41130	41565	
5MHz	1 (RB_Pos:0)	23.50	23.66	23.57	23.84	23.94	24.50	22.80	23.04	22.96	23.12	23.25	23.50
	1 (RB_Pos:50)	23.55	23.64	23.60	23.89	23.96	24.50	22.86	23.09	22.99	23.19	23.26	23.50
	1 (RB_Pos:99)	23.47	23.60	23.47	23.80	23.86	24.50	22.76	22.94	22.89	23.09	23.16	23.50
	50 (RB_Pos:0)	22.61	22.70	22.59	22.86	22.94	23.50	21.78	21.80	21.68	21.94	21.98	22.50
	50 (RB_Pos:25)	22.56	22.73	22.60	22.87	22.96	23.50	21.79	21.75	21.67	21.96	22.03	22.50
	50 (RB_Pos:50)	22.63	22.64	22.57	22.85	22.94	23.50	21.78	21.76	21.68	21.90	22.01	22.50
	100 (RB_Pos:0)	22.51	22.68	22.49	22.86	22.87	23.50	21.67	21.83	21.60	21.92	22.06	22.50

8.4 Intra-Band Uplink CA Normal Power

Note:

1. This device supports intra-band uplink CA of 3C
2. For intra-band uplink carrier aggregation power verification and measurement is selected highest PCC and SCC bandwidth combination to do and was according to 3GPP 36.52101 section 6.2.2A.1 and section 6.2.2A.2 test procedure.
3. For intra-band uplink CA output power was measured high / middle / low channel combination, and for SAR verification is selected highest output power combination with each exposure condition in each frequency band using the highest SAR configuration test in standalone LTE mode.

LTE Uplink 2CA_ Bnad38									
Combination 20MHz+20MHz(100RB+100RB)									
PCC	SCC	Bnadwidth	Modulation	PCC		SCC		Total RB Size	Measured Power(dBm)
				RB Size	RB Pos.	RB Size	RB Pos.		
37850	38048	20	QPSK	1	High	1	Low	2	22.74
38000	38099	20	QPSK	1	High	1	Low	2	22.82
38150	37952	20	QPSK	1	Low	1	High	2	22.79

8.5 WIFI

8.5.1 2.4G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4 (2.4~2.4835)	802.11b	1	2412	18.05	18.00	Yes
		6	2437	18.08	18.00	Yes
		11	2462	18.18	18.00	Yes
	802.11g	1	2412	16.22	17.00	No
		6	2437	16.49	17.00	No
		11	2462	16.55	17.00	No
	802.11n(HT20)	1	2412	16.08	17.00	No
		6	2437	16.33	17.00	No
		11	2462	16.38	17.00	No

8.5.2 5G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
5.2 (5.15~5.25)	802.11a	36	5180	18.20	17.00	No
		44	5220	18.11	17.00	No
		48	5240	17.98	17.00	No
	802.11n(HT20)	36	5180	18.01	17.00	No
		44	5220	17.93	17.00	No
		48	5240	17.84	17.00	No
	802.11n(HT40)	38	5190	17.45	16.00	No
		46	5230	17.30	16.00	No
	802.11ac(VHT20)	36	5180	18.03	17.00	No
		44	5220	17.95	17.00	No
		48	5240	17.81	17.00	No
	802.11ac(VHT40)	38	5190	17.31	16.00	No
		46	5230	17.29	16.00	No
	802.11ac(VHT80)	42	5210	10.34	9.00	No
	5.3 (5.25~5.35)	802.11a	52	5260	18.20	17.00
60			5300	18.41	17.00	Yes
64			5320	18.56	17.00	Yes
802.11n(HT20)		52	5260	17.97	17.00	No
		60	5300	18.26	17.00	No
		64	5320	18.44	17.00	No
802.11n(HT40)		54	5270	17.35	16.00	No
		62	5310	17.88	16.00	No
802.11ac(VHT20)		52	5260	17.95	17.00	No

		60	5300	18.25	17.00	No
		64	5320	18.42	17.00	No
	802.11ac(VHT40)	54	5270	17.33	16.00	No
		62	5310	17.86	16.00	No
	802.11ac(VHT80)	58	5290	11.64	10.00	No
5.6 (5.47~5.725)	802.11a	100	5500	17.62	17.00	Yes
		116	5580	17.18	17.00	Yes
		140	5700	17.05	17.00	Yes
	802.11n(HT20)	100	5500	17.50	17.00	No
		116	5580	17.05	17.00	No
		140	5700	16.72	17.00	No
	802.11n(HT40)	102	5510	16.85	16.00	No
		118	5590	16.36	16.00	No
		134	5670	16.37	16.00	No
	802.11ac(VHT20)	100	5500	17.53	17.00	No
		116	5580	17.03	17.00	No
		140	5700	16.60	17.00	No
	802.11ac(VHT40)	102	5510	16.87	16.00	No
		118	5590	16.34	16.00	No
		134	5670	16.32	16.00	No
	802.11ac(VHT80)	106	5530	10.61	10.00	No
		122	5690	10.16	10.00	No
	5.8 (5.725~5.850)	802.11a	149	5745	13.95	14.00
157			5785	13.72	14.00	No
165			5825	13.93	14.00	No
802.11n(HT20)		149	5745	13.71	14.00	No
		157	5785	13.57	14.00	No
		165	5825	13.75	14.00	No
802.11n(HT40)		151	5755	13.92	14.00	No
		159	5795	13.94	14.00	No
802.11ac(VHT20)		149	5745	13.86	14.00	No
		157	5785	13.77	14.00	No
		165	5825	13.98	14.00	No
802.11ac(VHT40)		151	5755	13.91	14.00	No
		159	5795	13.94	14.00	No
802.11ac(VHT80)		155	5775	13.98	14.00	Yes

8.6 Bluetooth

Mode	GFSK			$\pi/4$ -DQPSK		
Channel	0	39	78	0	39	78
Frequency (MHz)	2402	2441	2480	2402	2441	2480
Conducted Power (dBm)	10.73	11.35	11.68	10.07	10.61	11.15
Tune-Up Limit (dBm)	12.50			12.50		
Mode	8-DPSK			/		
Channel	0	39	78	/	/	/
Frequency (MHz)	2402	2441	2480	/	/	/
Conducted Power (dBm)	10.33	10.88	11.31	/	/	/
Tune-Up Limit (dBm)	12.50			/		
Mode	BLE (1Mbps)			BLE (2Mbps)		
Channel	0	19	39	0	19	39
Frequency (MHz)	2402	2440	2480	2402	2440	2480
Conducted Power (dBm)	3.77	5.33	7.01	3.93	5.42	7.05
Tune-Up Limit (dBm)	7.50			7.50		

8.7 Power Reduction List

8.7.1 Power Reduced Level 1&2&3 of GSM 850

GSM 850								
GSM1900 Band	Burst Average Power(dBm)			Tune-up Limit (dBm)	Frame-Averaged power(dBm)			Tune-up Limit (dBm)
Channel	128	190	251		128	190	251	
GSM (GMSK, 1-Slot)	28.28	28.31	28.11	29.50	19.09	19.12	18.92	20.31
GPRS (GMSK, 1-Slot)	28.31	28.31	28.10	29.50	19.12	19.12	18.91	20.31
GPRS (GMSK, 2-Slots)	26.10	26.14	26.73	27.00	19.97	20.01	20.60	20.87
GPRS (GMSK, 3-Slots)	23.79	23.76	24.22	25.00	19.37	19.34	19.80	20.58
GPRS (GMSK, 4-Slots)	22.66	22.62	23.14	25.00	19.48	19.44	19.96	21.82
EGPRS (8PSK, 1-Slot)	27.28	27.25	26.80	25.00	18.09	18.06	17.61	15.81
EGPRS (8PSK, 2-Slots)	24.27	24.15	23.91	23.00	18.14	18.02	17.78	16.87
EGPRS (8PSK, 3-Slots)	23.06	22.99	22.66	22.00	18.64	18.57	18.24	17.58
EGPRS (8PSK, 4-Slots)	22.60	22.34	21.90	22.00	19.42	19.16	18.72	18.82

8.7.2 Power Reduced Level 1&2&3 of GSM 1900

GSM 1900								
GSM1900 Band	Burst Average Power(dBm)			Tune-up Limit (dBm)	Frame-Averaged power(dBm)			Tune-up Limit (dBm)
Channel	512	661	810		512	661	810	
GSM (GMSK, 1-Slot)	26.89	26.63	26.67	27.50	17.70	17.44	17.48	18.31
GPRS (GMSK, 1-Slot)	27.00	26.89	26.76	27.50	17.81	17.70	17.57	18.31
GPRS (GMSK, 2-Slots)	23.36	23.32	23.38	24.00	17.23	17.19	17.25	17.87
GPRS (GMSK, 3-Slots)	21.72	21.67	21.44	22.00	17.30	17.25	17.02	17.58
GPRS (GMSK, 4-Slots)	20.76	20.69	20.72	21.00	17.58	17.51	17.54	17.82
EGPRS (8PSK, 1-Slot)	24.31	24.35	24.22	24.50	15.12	15.16	15.03	15.31
EGPRS (8PSK, 2-Slots)	20.86	20.98	20.95	21.50	14.73	14.85	14.82	15.37
EGPRS (8PSK, 3-Slots)	19.63	19.70	19.73	20.00	15.21	15.28	15.31	15.58
EGPRS (8PSK, 4-Slots)	18.44	18.43	18.38	18.50	15.26	15.25	15.20	15.32

8.7.3 Power Reduced Level 1&2&3 of WCDMA Band 2

WCDMA	Band 2			
Channel	9262	9400	9538	Tune-up Limit (dBm)
RMC 12.2Kbps	18.30	18.50	18.37	19.50
HSDPA Subtest-1	17.25	17.38	17.25	18.50
HSDPA Subtest-2	17.24	17.26	17.23	18.50
HSDPA Subtest-3	16.73	16.70	16.72	18.00
HSDPA Subtest-4	16.75	16.79	16.76	18.00
HSUPA Subtest-1	17.26	17.24	17.28	18.50
HSUPA Subtest-2	15.18	15.20	15.15	16.50
HSUPA Subtest-3	16.24	16.22	16.28	17.50
HSUPA Subtest-4	15.23	15.18	15.21	16.50
HSUPA Subtest-5	17.19	17.23	17.20	18.50

8.7.4 Power Reduced Level 1&2&3 of WCDMA Band 4

WCDMA	Band 4			
Channel	1312	1412	1513	Tune-up Limit (dBm)
RMC 12.2Kbps	19.58	19.70	19.66	20.50
HSDPA Subtest-1	18.50	18.64	18.58	19.50
HSDPA Subtest-2	18.53	18.62	18.53	19.50
HSDPA Subtest-3	17.97	17.95	17.98	19.00
HSDPA Subtest-4	17.94	17.96	17.97	19.00
HSUPA Subtest-1	18.55	18.74	18.57	19.50
HSUPA Subtest-2	16.53	16.68	16.51	17.50
HSUPA Subtest-3	17.42	17.53	17.51	18.50
HSUPA Subtest-4	16.49	16.63	16.52	17.50
HSUPA Subtest-5	18.59	18.76	18.45	19.50

8.7.5 Power Reduced Level 1&2&3 of WCDMA Band 5

WCDMA	Band 5			
Channel	4132	4182	4233	Tune-up Limit (dBm)
RMC 12.2Kbps	21.39	21.26	21.47	22.50
HSDPA Subtest-1	20.38	20.31	20.38	21.50
HSDPA Subtest-2	20.35	20.32	20.37	21.50
HSDPA Subtest-3	19.88	19.82	19.84	21.00
HSDPA Subtest-4	19.85	19.80	19.86	21.00
HSUPA Subtest-1	20.34	20.30	20.36	21.50
HSUPA Subtest-2	18.27	18.24	18.26	19.50
HSUPA Subtest-3	19.36	19.34	19.37	20.50
HSUPA Subtest-4	18.26	18.21	18.23	19.50
HSUPA Subtest-5	20.36	20.31	20.33	21.50

8.7.6 Power Reduced Level 1&2&3 of LTE Band 2

FDD LTE Band 2									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	18700	18900	19100		18700	18900	19100	
20 MHz	1 (RB_Pos:0)	18.56	18.52	18.35	19.00	18.28	18.51	18.27	19.00
	1 (RB_Pos:50)	18.22	18.30	18.15	19.00	18.36	18.31	18.37	19.00
	1 (RB_Pos:99)	18.33	18.49	18.12	19.00	18.32	18.48	18.44	19.00
	50 (RB_Pos:0)	18.38	18.42	18.39	19.00	18.18	18.38	18.16	19.00
	50 (RB_Pos:25)	18.28	18.38	18.37	19.00	18.48	18.42	18.42	19.00
	50 (RB_Pos:50)	18.26	18.43	18.26	19.00	18.34	18.28	18.44	19.00
	100 (RB_Pos:0)	18.29	18.45	18.36	19.00	18.27	18.51	18.35	19.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	18675	18900	19125		18675	18900	19125	
15 MHz	1 (RB_Pos:0)	18.33	18.28	18.48	19.00	18.24	18.18	18.34	19.00
	1 (RB_Pos:38)	18.46	18.52	18.17	19.00	18.30	18.24	18.54	19.00
	1 (RB_Pos:74)	18.26	18.41	18.23	19.00	18.43	18.55	18.53	19.00
	36 (RB_Pos:0)	18.50	18.51	18.21	19.00	18.24	18.45	18.20	19.00
	36 (RB_Pos:20)	18.54	18.40	18.18	19.00	18.38	18.36	18.35	19.00
	36 (RB_Pos:39)	18.43	18.41	18.53	19.00	18.44	18.27	18.32	19.00
	75 (RB_Pos:0)	18.35	18.52	18.51	19.00	18.28	18.44	18.37	19.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	18650	18900	19150		18650	18900	19150	
10 MHz	1 (RB_Pos:0)	18.24	18.39	18.32	19.00	18.49	18.52	18.52	19.00
	1 (RB_Pos:25)	18.31	18.24	18.29	19.00	18.25	18.23	18.18	19.00
	1 (RB_Pos:49)	18.31	18.32	18.30	19.00	18.36	18.15	18.23	19.00
	25 (RB_Pos:0)	18.16	18.50	18.25	19.00	18.18	18.32	18.34	19.00
	25 (RB_Pos:12)	18.33	18.41	18.52	19.00	18.45	18.24	18.22	19.00
	25 (RB_Pos:25)	18.38	18.38	18.15	19.00	18.21	18.33	18.33	19.00
	50 (RB_Pos:0)	18.32	18.38	18.49	19.00	18.15	18.37	18.36	19.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	18625	18900	19175		18625	18900	19175	
5 MHz	1 (RB_Pos:0)	18.19	18.40	18.42	19.00	18.28	18.49	18.52	19.00
	1 (RB_Pos:13)	18.43	18.30	18.35	19.00	18.45	18.54	18.54	19.00
	1 (RB_Pos:24)	18.51	18.53	18.44	19.00	18.52	18.33	18.25	19.00
	12 (RB_Pos:0)	18.23	18.52	18.18	19.00	18.18	18.42	18.20	19.00
	12 (RB_Pos:6)	18.24	18.16	18.21	19.00	18.52	18.16	18.49	19.00
	12 (RB_Pos:13)	18.44	18.39	18.17	19.00	18.31	18.55	18.17	19.00

	25 (RB_Pos:0)	18.17	18.20	18.51	19.00	18.51	18.32	18.40	19.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	18615	18900	19185		18615	18900	19185	
3.0 MHz	1 (RB_Pos:0)	18.54	18.44	18.33	19.00	18.46	18.51	18.35	19.00
	1 (RB_Pos:8)	18.26	18.36	18.46	19.00	18.39	18.39	18.48	19.00
	1 (RB_Pos:14)	18.46	18.21	18.39	19.00	18.44	18.20	18.22	19.00
	8 (RB_Pos:0)	18.19	18.52	18.32	19.00	18.31	18.24	18.29	19.00
	8 (RB_Pos:3)	18.33	18.46	18.24	19.00	18.19	18.16	18.39	19.00
	8 (RB_Pos:7)	18.18	18.51	18.34	19.00	18.45	18.17	18.47	19.00
	15 (RB_Pos:0)	18.42	18.45	18.20	19.00	18.41	18.18	18.28	19.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	18607	18900	19193		18607	18900	19193	
1.4 MHz	1 (RB_Pos:0)	18.27	18.48	18.47	19.00	18.37	18.32	18.49	19.00
	1 (RB_Pos:3)	18.22	18.45	18.25	19.00	18.49	18.51	18.15	19.00
	1 (RB_Pos:5)	18.38	18.18	18.23	19.00	18.54	18.36	18.20	19.00
	3 (RB_Pos:0)	18.43	18.35	18.18	19.00	18.20	18.18	18.46	19.00
	3 (RB_Pos:1)	18.47	18.36	18.19	19.00	18.29	18.18	18.31	19.00
	3 (RB_Pos:3)	18.45	18.51	18.52	19.00	18.15	18.42	18.38	19.00
	6 (RB_Pos:0)	18.29	18.41	18.20	19.00	18.34	18.47	18.26	19.00

8.7.7 Power Reduced Level 1&2&3 of LTE Band 4

FDD LTE Band 4									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20050	20175	20300		20050	20175	20300	
20 MHz	1 (RB_Pos:0)	19.07	19.09	19.07	20.00	19.16	19.09	19.08	20.00
	1 (RB_Pos:50)	18.88	18.97	18.83	20.00	18.96	18.92	18.86	20.00
	1 (RB_Pos:99)	18.87	18.94	18.76	20.00	18.90	18.92	18.79	20.00
	50 (RB_Pos:0)	19.07	19.15	19.08	20.00	19.14	19.18	19.10	20.00
	50 (RB_Pos:25)	18.98	19.02	18.99	20.00	19.08	19.12	19.04	20.00
	50 (RB_Pos:50)	18.90	18.97	18.91	20.00	18.98	19.07	18.98	20.00
	100 (RB_Pos:0)	18.95	19.06	19.01	20.00	19.07	19.12	19.04	20.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20025	20175	20325		20025	20175	20325	
15 MHz	1 (RB_Pos:0)	19.08	19.20	19.20	20.00	18.87	19.06	18.90	20.00
	1 (RB_Pos:38)	18.86	19.09	18.88	20.00	18.95	19.13	19.05	20.00

	1 (RB_Pos:74)	19.03	19.21	19.23	20.00	19.21	19.25	19.03	20.00
	36 (RB_Pos:0)	19.21	19.03	18.98	20.00	19.07	18.98	19.23	20.00
	36 (RB_Pos:20)	19.18	19.23	19.16	20.00	18.89	18.97	19.09	20.00
	36 (RB_Pos:39)	19.14	18.93	19.03	20.00	19.09	19.01	19.12	20.00
	75 (RB_Pos:0)	19.13	19.17	18.93	20.00	19.12	19.02	19.09	20.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20000	20175	20350		20000	20175	20350	
10 MHz	1 (RB_Pos:0)	18.92	19.13	19.10	20.00	0.00	0.00	0.00	20.00
	1 (RB_Pos:25)	19.19	18.96	18.91	20.00	19.09	18.88	18.93	20.00
	1 (RB_Pos:49)	19.18	19.25	19.12	20.00	19.05	19.17	19.00	20.00
	25 (RB_Pos:0)	18.93	19.24	19.08	20.00	18.99	18.88	18.90	20.00
	25 (RB_Pos:12)	18.93	19.13	19.24	20.00	19.22	19.11	19.01	20.00
	25 (RB_Pos:25)	19.13	18.88	19.25	20.00	19.17	19.09	19.02	20.00
	50 (RB_Pos:0)	19.24	19.21	19.13	20.00	18.90	19.08	19.05	20.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	19975	20175	20375		19975	20175	20375	
5 MHz	1 (RB_Pos:0)	18.99	18.96	19.03	20.00	18.93	19.08	19.23	20.00
	1 (RB_Pos:13)	18.94	19.23	18.88	20.00	18.93	19.12	18.91	20.00
	1 (RB_Pos:24)	18.90	18.95	18.99	20.00	19.23	19.25	18.98	20.00
	12 (RB_Pos:0)	18.92	18.98	18.96	20.00	19.18	18.92	18.89	20.00
	12 (RB_Pos:6)	18.86	19.12	19.14	20.00	18.91	19.04	19.03	20.00
	12 (RB_Pos:13)	19.14	19.16	18.91	20.00	18.87	18.96	19.25	20.00
	25 (RB_Pos:0)	18.98	19.22	19.02	20.00	19.18	19.05	18.94	20.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	19965	20175	20385		19965	20175	20385	
3.0 MHz	1 (RB_Pos:0)	19.20	19.00	19.03	20.00	19.02	19.24	19.03	20.00
	1 (RB_Pos:8)	19.05	19.20	18.89	20.00	19.16	18.93	18.88	20.00
	1 (RB_Pos:14)	19.20	19.08	19.21	20.00	19.21	19.13	18.90	20.00
	8 (RB_Pos:0)	19.16	19.24	19.04	20.00	19.07	18.91	18.95	20.00
	8 (RB_Pos:3)	19.17	18.93	18.99	20.00	19.09	18.97	19.16	20.00
	8 (RB_Pos:7)	19.15	19.17	19.03	20.00	19.17	19.06	19.25	20.00
	15 (RB_Pos:0)	19.18	19.22	19.06	20.00	19.14	19.23	18.99	20.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	19957	20175	20393		19957	20175	20393	
1.4 MHz	1 (RB_Pos:0)	19.10	19.24	19.22	20.00	18.90	18.94	19.04	20.00
	1 (RB_Pos:3)	19.02	19.05	19.01	20.00	19.25	18.98	18.88	20.00
	1 (RB_Pos:5)	19.12	19.16	19.08	20.00	18.88	18.95	19.21	20.00

	3 (RB_Pos:0)	18.97	18.88	18.86	20.00	19.16	19.13	19.10	20.00
	3 (RB_Pos:1)	18.89	19.17	19.22	20.00	18.92	19.07	19.02	20.00
	3 (RB_Pos:3)	18.90	18.98	18.97	20.00	19.18	19.09	18.94	20.00
	6 (RB_Pos:0)	18.99	19.09	18.85	20.00	18.95	19.20	19.03	20.00

8.7.8 Power Reduced Level 1&2&3 of LTE Band 5

FDD LTE Band 5									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20450	20525	20600		20450	20525	20600	
10 MHz	1 (RB_Pos:0)	21.31	21.44	21.37	22.50	21.26	21.42	21.39	22.50
	1 (RB_Pos:25)	21.39	21.22	21.38	22.50	21.43	21.32	21.39	22.50
	1 (RB_Pos:49)	21.42	21.26	21.19	22.50	21.18	21.42	21.37	22.50
	25 (RB_Pos:0)	21.31	21.42	21.24	22.50	21.25	21.17	21.29	22.50
	25 (RB_Pos:12)	21.32	21.17	21.30	22.50	21.23	21.37	21.25	22.50
	25 (RB_Pos:25)	21.27	21.31	21.33	22.50	21.36	21.26	21.26	22.50
	50 (RB_Pos:0)	21.19	21.29	21.36	22.50	21.21	21.38	21.32	22.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20425	20525	20625		20425	20525	20625	
5MHz	1 (RB_Pos:0)	21.34	21.45	21.42	22.50	21.23	21.44	21.37	22.50
	1 (RB_Pos:13)	21.28	21.28	21.26	22.50	21.29	21.33	21.40	22.50
	1 (RB_Pos:24)	21.23	21.27	21.15	22.50	21.19	21.33	21.16	22.50
	12 (RB_Pos:0)	21.22	21.29	21.37	22.50	21.31	21.26	21.25	22.50
	12 (RB_Pos:6)	21.31	21.16	21.41	22.50	21.18	21.30	21.16	22.50
	12 (RB_Pos:13)	21.15	21.19	21.15	22.50	21.30	21.23	21.43	22.50
	25 (RB_Pos:0)	21.38	21.39	21.16	22.50	21.36	21.38	21.17	22.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20415	20525	20635		20415	20525	20635	
3.0 MHz	1 (RB_Pos:0)	21.16	21.24	21.15	22.50	21.26	21.24	21.17	22.50
	1 (RB_Pos:8)	21.42	21.35	21.21	22.50	21.19	21.34	21.26	22.50
	1 (RB_Pos:14)	21.24	21.23	21.43	22.50	21.17	21.27	21.26	22.50
	8 (RB_Pos:0)	21.24	21.43	21.21	22.50	21.33	21.33	21.28	22.50
	8 (RB_Pos:3)	21.41	21.23	21.32	22.50	21.16	21.15	21.42	22.50
	8 (RB_Pos:7)	21.15	21.25	21.19	22.50	21.19	21.36	21.39	22.50
	15 (RB_Pos:0)	21.40	21.37	21.37	22.50	21.42	21.19	21.29	22.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit	16QAM			limit
	Channel	20407	20525	20643		20407	20525	20643	

					(dBm)				(dBm)
1.4MHz	1 (RB_Pos:0)	21.29	21.42	21.31	22.50	21.38	21.26	21.29	22.50
	1 (RB_Pos:3)	21.20	21.17	21.41	22.50	21.17	21.17	21.25	22.50
	1 (RB_Pos:5)	21.28	21.21	21.39	22.50	21.24	21.24	21.21	22.50
	3 (RB_Pos:0)	21.22	21.21	21.25	22.50	21.37	21.30	21.29	22.50
	3 (RB_Pos:1)	21.39	21.45	21.38	22.50	21.23	21.41	21.18	22.50
	3 (RB_Pos:3)	21.19	21.15	21.22	22.50	21.41	21.28	21.38	22.50
	6 (RB_Pos:0)	21.42	21.38	21.31	22.50	21.20	21.24	21.30	22.50

8.7.9 Power Reduced Level 1&2&3 of LTE Band 7

FDD LTE Band 7									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20850	21100	21350		20850	21100	21350	
20MHz	1 (RB_Pos:0)	15.80	15.93	15.90	17.00	16.06	15.99	15.99	17.00
	1 (RB_Pos:50)	15.62	15.75	15.68	17.00	15.80	15.86	15.77	17.00
	1 (RB_Pos:99)	15.58	15.71	15.72	17.00	15.77	15.85	15.79	17.00
	50 (RB_Pos:0)	15.80	15.87	15.89	17.00	15.50	15.54	15.55	17.00
	50 (RB_Pos:25)	15.75	15.86	15.91	17.00	15.45	15.57	15.57	17.00
	50 (RB_Pos:50)	15.60	15.77	15.83	17.00	15.33	15.46	15.48	17.00
	100 (RB_Pos:0)	15.68	15.82	15.91	17.00	15.42	15.49	15.59	17.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20825	21100	21375		20825	21100	21375	
15MHz	1 (RB_Pos:0)	15.87	16.07	15.93	17.00	15.65	15.84	15.90	17.00
	1 (RB_Pos:38)	15.93	15.91	15.74	17.00	15.62	15.68	15.70	17.00
	1 (RB_Pos:74)	15.85	15.80	15.66	17.00	15.88	16.04	15.90	17.00
	36 (RB_Pos:0)	15.63	15.69	16.02	17.00	15.79	15.93	15.82	17.00
	36 (RB_Pos:20)	16.04	15.84	15.71	17.00	15.68	15.80	15.93	17.00
	36 (RB_Pos:39)	15.71	15.91	15.76	17.00	15.69	16.00	15.95	17.00
	75 (RB_Pos:0)	15.61	16.00	16.04	17.00	15.81	15.99	15.86	17.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20800	21100	21400		20800	21100	21400	
10MHz	1 (RB_Pos:0)	15.92	15.66	16.04	17.00	15.78	15.92	15.87	17.00
	1 (RB_Pos:25)	15.92	15.72	15.88	17.00	15.96	16.04	15.98	17.00
	1 (RB_Pos:49)	15.65	15.85	15.71	17.00	16.02	15.70	15.66	17.00
	25 (RB_Pos:0)	15.76	15.62	15.65	17.00	15.61	15.96	15.90	17.00
	25 (RB_Pos:12)	15.86	15.98	15.62	17.00	15.66	15.61	15.86	17.00
	25 (RB_Pos:25)	16.01	15.66	15.88	17.00	15.98	15.62	16.01	17.00

Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
		Channel	20775	21100		21425	20775	21100	
50 (RB_Pos:0)		15.67	15.81	15.83	17.00	15.77	15.91	15.78	17.00
5MHz	1 (RB_Pos:0)	15.81	15.99	15.81	17.00	15.80	15.94	15.85	17.00
	1 (RB_Pos:13)	15.87	15.93	15.99	17.00	15.98	16.04	15.75	17.00
	1 (RB_Pos:24)	15.97	16.01	15.91	17.00	15.82	15.70	15.99	17.00
	12 (RB_Pos:0)	15.88	15.80	16.03	17.00	15.91	15.64	15.64	17.00
	12 (RB_Pos:6)	15.94	15.85	16.00	17.00	15.65	15.94	15.96	17.00
	12 (RB_Pos:13)	15.69	15.99	15.74	17.00	15.63	16.05	15.68	17.00
	25 (RB_Pos:0)	15.90	15.97	15.82	17.00	16.00	15.77	16.01	17.00

8.7.10 Power Reduced Level 1&2&3 of LTE Band 26

TDD LTE Band 26									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
		Channel	26765	26865		26965	26765	26865	
15MHz	1 (RB_Pos:0)	21.60	21.56	21.56	22.50	21.45	21.55	21.59	22.50
	1 (RB_Pos:50)	21.38	21.52	21.38	22.50	21.45	21.61	21.44	22.50
	1 (RB_Pos:99)	21.50	21.60	21.64	22.50	21.37	21.44	21.46	22.50
	50 (RB_Pos:0)	21.52	21.37	21.43	22.50	21.59	21.55	21.65	22.50
	50 (RB_Pos:25)	21.50	21.37	21.48	22.50	21.56	21.62	21.62	22.50
	50 (RB_Pos:50)	21.38	21.58	21.60	22.50	21.57	21.44	21.37	22.50
	100 (RB_Pos:0)	21.56	21.60	21.54	22.50	21.43	21.44	21.50	22.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
		Channel	26740	26865		26990	26740	26865	
10MHz	1 (RB_Pos:0)	21.37	21.36	21.54	22.50	21.52	21.56	21.49	22.50
	1 (RB_Pos:38)	21.62	21.59	21.53	22.50	21.58	21.36	21.44	22.50
	1 (RB_Pos:74)	21.56	21.40	21.58	22.50	21.38	21.53	21.54	22.50
	36 (RB_Pos:0)	21.37	21.49	21.46	22.50	21.54	21.41	21.64	22.50
	36 (RB_Pos:20)	21.43	21.59	21.44	22.50	21.42	21.54	21.54	22.50
	36 (RB_Pos:39)	21.49	21.55	21.58	22.50	21.47	21.61	21.58	22.50
	75 (RB_Pos:0)	21.57	21.47	21.59	22.50	21.62	21.39	21.45	22.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
		Channel	26715	26865		27015	26715	26865	
5MHz	1 (RB_Pos:0)	21.46	21.58	21.65	22.50	21.50	21.62	21.55	22.50
	1 (RB_Pos:25)	21.46	21.62	21.39	22.50	21.51	21.46	21.44	22.50

Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
		Channel	26705	26865		27025	26705	26865	
	1 (RB_Pos:49)	21.47	21.48	21.55	22.50	21.39	21.51	21.65	22.50
	25 (RB_Pos:0)	21.55	21.56	21.61	22.50	21.49	21.62	21.39	22.50
	25 (RB_Pos:12)	21.38	21.54	21.43	22.50	21.36	21.36	21.60	22.50
	25 (RB_Pos:25)	21.49	21.60	21.63	22.50	21.38	21.38	21.44	22.50
	50 (RB_Pos:0)	21.41	21.61	21.51	22.50	21.39	21.51	21.53	22.50
3MHz	1 (RB_Pos:0)	21.51	21.63	21.65	22.50	21.48	21.61	21.48	22.50
	1 (RB_Pos:13)	21.62	21.58	21.61	22.50	21.38	21.47	21.60	22.50
	1 (RB_Pos:24)	21.51	21.51	21.45	22.50	21.36	21.37	21.53	22.50
	12 (RB_Pos:0)	21.59	21.37	21.63	22.50	21.56	21.53	21.42	22.50
	12 (RB_Pos:6)	21.59	21.56	21.51	22.50	21.46	21.48	21.42	22.50
	12 (RB_Pos:13)	21.46	21.51	21.55	22.50	21.42	21.45	21.35	22.50
	25 (RB_Pos:0)	21.58	21.39	21.39	22.50	21.44	21.64	21.56	22.50
1.4MHz	1 (RB_Pos:0)	21.53	21.35	21.36	22.50	21.39	21.61	21.39	22.50
	1 (RB_Pos:13)	21.51	21.61	21.39	22.50	21.43	21.40	21.42	22.50
	1 (RB_Pos:24)	21.49	21.41	21.52	22.50	21.65	21.57	21.36	22.50
	12 (RB_Pos:0)	21.38	21.63	21.64	22.50	21.58	21.42	21.37	22.50
	12 (RB_Pos:6)	21.54	21.41	21.37	22.50	21.39	21.48	21.63	22.50
	12 (RB_Pos:13)	21.40	21.48	21.46	22.50	21.60	21.45	21.50	22.50
	25 (RB_Pos:0)	21.53	21.64	21.37	22.50	21.50	21.36	21.44	22.50

8.7.11 Power Reduced Level 1&2&3 of LTE Band 38

TDD LTE Band 38									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
		Channel	37850	38000		38150	37850	38000	
20MHz	1 (RB_Pos:0)	18.91	19.06	19.18	20.00	19.08	19.07	19.29	20.00
	1 (RB_Pos:50)	18.86	18.94	18.98	20.00	18.94	18.92	19.04	20.00
	1 (RB_Pos:99)	18.81	18.84	18.95	20.00	18.89	18.85	19.04	20.00
	50 (RB_Pos:0)	18.99	19.11	19.05	20.00	19.09	19.23	19.18	20.00
	50 (RB_Pos:25)	19.02	19.07	19.01	20.00	19.14	19.19	19.12	20.00
	50 (RB_Pos:50)	18.88	18.97	18.91	20.00	19.00	19.06	19.02	20.00
	100 (RB_Pos:0)	18.99	19.05	18.97	20.00	19.12	19.13	19.07	20.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up	16QAM			Tune up
		Channel	37850	38000		38150	37850	38000	

	Channel	37825	38000	38175	limit (dBm)	37825	38000	38175	limit (dBm)
15MHz	1 (RB_Pos:0)	19.10	19.07	19.01	20.00	19.17	19.23	19.03	20.00
	1 (RB_Pos:38)	19.13	19.15	18.92	20.00	19.15	19.21	18.87	20.00
	1 (RB_Pos:74)	18.99	19.16	19.20	20.00	18.89	19.03	18.95	20.00
	36 (RB_Pos:0)	19.06	18.87	18.94	20.00	19.02	19.15	18.87	20.00
	36 (RB_Pos:20)	18.86	18.87	19.08	20.00	19.10	19.24	19.00	20.00
	36 (RB_Pos:39)	18.90	19.24	19.18	20.00	18.97	18.87	18.99	20.00
	75 (RB_Pos:0)	19.02	19.15	19.17	20.00	19.22	19.19	19.03	20.00
Bandwidth (MHz)	RB Set	Power (dBm)							
	Channel	QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
		37800	38000	38200		37800	38000	38200	
10MHz	1 (RB_Pos:0)	19.19	19.15	19.15	20.00	19.17	18.92	18.88	20.00
	1 (RB_Pos:25)	19.00	19.23	19.07	20.00	19.10	18.86	18.87	20.00
	1 (RB_Pos:49)	18.94	19.16	19.07	20.00	19.14	19.13	18.93	20.00
	25 (RB_Pos:0)	19.15	18.88	18.91	20.00	19.13	19.08	19.13	20.00
	25 (RB_Pos:12)	19.13	18.85	18.88	20.00	19.01	19.24	18.93	20.00
	25 (RB_Pos:25)	18.93	19.11	19.22	20.00	19.05	19.02	19.12	20.00
	50 (RB_Pos:0)	18.95	18.92	19.00	20.00	19.15	18.99	18.85	20.00
Bandwidth (MHz)	RB Set	Power (dBm)							
	Channel	QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
		37775	38000	38225		37775	38000	38225	
5MHz	1 (RB_Pos:0)	19.01	19.19	18.95	20.00	19.01	19.02	19.01	20.00
	1 (RB_Pos:13)	19.12	19.18	19.04	20.00	19.07	19.09	18.91	20.00
	1 (RB_Pos:24)	19.10	19.09	19.14	20.00	19.00	19.11	18.86	20.00
	12 (RB_Pos:0)	18.97	19.25	19.22	20.00	19.02	18.95	19.10	20.00
	12 (RB_Pos:6)	19.12	18.99	19.22	20.00	19.21	18.97	19.20	20.00
	12 (RB_Pos:13)	19.09	19.08	19.13	20.00	19.24	18.97	18.94	20.00
	25 (RB_Pos:0)	19.17	19.13	19.09	20.00	19.10	19.22	19.00	20.00

8.7.12 Power Reduced Level 1&2&3 of LTE Band 41

TDD LTE Band 41													
Bandwidth (MHz)	RB Set	Power (dBm)											
		QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
	Channel	39750	40185	40620	41055	41490		39750	40185	40620	41055	41490	
20MHz	1 (RB_Pos:0)	18.13	18.03	17.78	17.77	17.99	20.00	18.04	18.15	17.80	17.90	18.11	20.00
	1 (RB_Pos:50)	17.95	18.00	17.90	17.88	18.19	20.00	18.05	17.76	18.09	18.14	18.18	20.00
	1 (RB_Pos:99)	17.95	18.12	18.12	17.99	18.25	20.00	17.80	17.80	18.01	18.11	17.97	20.00
	50 (RB_Pos:0)	18.06	18.08	17.83	18.12	18.10	20.00	18.05	18.04	18.02	17.87	18.16	20.00

	50 (RB_Pos:25)	17.81	17.84	17.77	17.98	18.09	20.00	18.07	18.06	18.11	17.78	18.03	20.00
	50 (RB_Pos:50)	18.12	18.02	18.00	17.79	18.24	20.00	17.77	17.81	18.13	17.83	18.11	20.00
	100 (RB_Pos:0)	17.99	17.83	18.12	17.90	18.14	20.00	17.80	17.77	17.79	17.78	18.09	20.00
Bandwidth (MHz)	RB Set	Power (dBm)											
		QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
	Channel	39725	40160	40620	41080	41515		39725	40160	40620	41080	41515	
15MHz	1 (RB_Pos:0)	17.79	18.03	17.95	17.97	18.16	20.00	17.82	17.88	17.87	17.87	18.07	20.00
	1 (RB_Pos:50)	17.84	17.89	17.96	18.05	18.20	20.00	17.87	17.77	17.92	18.00	18.22	20.00
	1 (RB_Pos:99)	18.11	17.81	17.81	18.02	18.24	20.00	17.91	18.02	17.76	18.08	18.28	20.00
	50 (RB_Pos:0)	17.77	18.03	18.01	17.79	18.21	20.00	17.97	17.91	18.07	17.79	17.98	20.00
	50 (RB_Pos:25)	17.76	18.10	17.86	18.01	17.97	20.00	18.10	17.86	17.97	18.11	18.02	20.00
	50 (RB_Pos:50)	18.14	18.05	17.93	18.01	18.09	20.00	17.96	18.09	18.09	18.05	18.25	20.00
	100 (RB_Pos:0)	17.87	17.79	18.09	17.81	18.16	20.00	18.00	17.87	18.10	17.79	18.10	20.00
Bandwidth (MHz)	RB Set	Power (dBm)											
		QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
	Channel	39700	40135	40620	41105	41540		39700	40135	40620	41105	41540	
10MHz	1 (RB_Pos:0)	17.89	17.94	18.12	18.00	18.31	20.00	17.86	17.94	18.14	17.97	18.12	20.00
	1 (RB_Pos:50)	18.08	17.76	18.00	17.91	18.19	20.00	17.94	18.12	18.08	17.87	18.06	20.00
	1 (RB_Pos:99)	17.82	17.97	18.06	17.84	18.13	20.00	17.87	17.98	17.85	17.80	18.30	20.00
	50 (RB_Pos:0)	17.96	17.87	18.15	18.01	18.34	20.00	18.12	18.01	17.98	17.80	18.02	20.00
	50 (RB_Pos:25)	18.04	17.87	17.78	17.88	18.27	20.00	18.00	17.93	17.94	17.94	17.99	20.00
	50 (RB_Pos:50)	18.08	18.08	17.92	17.97	17.95	20.00	17.95	17.78	18.15	17.84	18.16	20.00
	100 (RB_Pos:0)	17.78	18.05	17.86	18.13	18.17	20.00	17.80	18.08	17.97	18.01	18.34	20.00
Bandwidth (MHz)	RB Set	Power (dBm)											
		QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
	Channel	39675	40110	40620	41130	41565		39675	40110	40620	41130	41565	
5MHz	1 (RB_Pos:0)	17.81	18.01	18.00	17.87	18.26	20.00	18.04	18.01	17.90	18.04	18.02	20.00
	1 (RB_Pos:50)	18.14	17.86	17.92	17.83	18.02	20.00	17.90	17.76	17.86	18.14	18.18	20.00
	1 (RB_Pos:99)	18.02	17.97	18.06	18.09	18.10	20.00	17.99	17.98	17.75	17.94	18.27	20.00
	50 (RB_Pos:0)	17.85	18.08	18.08	17.77	18.16	20.00	17.95	17.81	17.77	17.98	18.14	20.00
	50 (RB_Pos:25)	18.04	18.06	18.03	18.12	18.14	20.00	18.03	17.91	18.02	17.89	17.99	20.00
	50 (RB_Pos:50)	18.07	18.10	17.91	18.00	18.21	20.00	17.76	18.04	17.86	17.99	17.98	20.00
	100 (RB_Pos:0)	17.76	18.06	17.97	17.78	18.20	20.00	17.91	17.95	17.81	18.04	18.25	20.00

8.7.13 Power Reduced Level 1&2&3 of LTE Uplink 2CA_ Bnad38

LTE Uplink 2CA_ Bnad38-Level1									
Combination 20MHz+20MHz(100RB+100RB)									
PCC	SCC	Bnadwidth	Modulation	PCC		SCC		Total RB Size	Measured Power(dBm)
				RB Size	RB Pos.	RB Size	RB Pos.		
37850	38048	20	QPSK	1	High	1	Low	2	18.57
38000	38099	20	QPSK	1	High	1	Low	2	18.64
38150	37952	20	QPSK	1	Low	1	High	2	18.62

8.7.14 Power Reduced Level 2 of 2.4G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4 (2.4~2.4835)	802.11b	1	2412	14.76	15.00	Yes
		6	2437	14.87	15.00	Yes
		11	2462	14.85	15.00	Yes
	802.11g	1	2412	13.74	14.00	No
		6	2437	13.78	14.00	No
		11	2462	13.80	14.00	No
	802.11n(HT20)	1	2412	13.77	14.00	No
		6	2437	13.74	14.00	No
		11	2462	13.80	14.00	No

8.7.15 Power Reduced Level 1 of 5G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
5.6 (5.47~5.725)	802.11a	100	5500	16.38	16.50	Yes
		116	5580	16.37	16.50	Yes
		140	5700	16.29	16.50	Yes
	802.11n(HT20)	100	5500	16.28	16.50	No
		116	5580	16.24	16.50	No
		140	5700	16.21	16.50	No
	802.11n(HT40)	102	5510	15.39	15.50	No
		118	5590	15.36	15.50	No
		134	5670	15.23	15.50	No
	802.11ac(VHT20)	100	5500	16.30	16.50	No
		116	5580	16.22	16.50	No
		140	5700	16.33	16.50	No
	802.11ac(VHT40)	102	5510	15.26	15.50	No
		118	5590	15.39	15.50	No
		134	5670	15.33	15.50	No
	802.11ac(VHT80)	106	5530	9.21	9.50	No
		122	5690	9.35	9.50	No

8.7.16 Power Reduced Level 2 of 5G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
5.2 (5.15~5.25)	802.11a	36	5180	14.80	15.00	No
		44	5220	14.78	15.00	No
		48	5240	14.75	15.00	No
	802.11n(HT20)	36	5180	14.83	15.00	No
		44	5220	14.81	15.00	No
		48	5240	14.93	15.00	No
	802.11n(HT40)	38	5190	13.93	14.00	No
		46	5230	13.84	14.00	No
	802.11ac(VHT20)	36	5180	14.81	15.00	No
		44	5220	14.77	15.00	No
		48	5240	14.97	15.00	No
	802.11ac(VHT40)	38	5190	13.88	14.00	No
46		5230	13.67	14.00	No	
802.11ac(VHT80)	42	5210	6.72	7.00	No	
5.3 (5.25~5.35)	802.11a	52	5260	14.85	15.00	Yes
		60	5300	14.86	15.00	Yes
		64	5320	14.90	15.00	Yes
	802.11n(HT20)	52	5260	14.82	15.00	No
		60	5300	14.92	15.00	No
		64	5320	14.82	15.00	No
	802.11n(HT40)	54	5270	13.95	14.00	No
		62	5310	13.83	14.00	No
	802.11ac(VHT20)	52	5260	14.90	15.00	No
		60	5300	14.91	15.00	No
		64	5320	14.78	15.00	No
	802.11ac(VHT40)	54	5270	13.83	14.00	No
		62	5310	13.79	14.00	No
	802.11ac(VHT80)	58	5290	7.91	8.00	No
	5.6 (5.47~5.725)	802.11a	100	5500	14.40	14.50
116			5580	14.25	14.50	Yes
140			5700	14.20	14.50	Yes
802.11n(HT20)		100	5500	14.32	14.50	No
		116	5580	14.35	14.50	No
		140	5700	14.29	14.50	No
802.11n(HT40)		102	5510	13.30	13.50	No
		118	5590	13.27	13.50	No
		134	5670	13.23	13.50	No
802.11ac(VHT20)		100	5500	14.33	14.50	No

		116	5580	14.36	14.50	No
		140	5700	14.32	14.50	No
	802.11ac(VHT40)	102	5510	13.32	13.50	No
		118	5590	13.21	13.50	No
		134	5670	13.28	13.50	No
	802.11ac(VHT80)	106	5530	7.36	7.50	No
		122	5690	7.39	7.50	No
5.8 (5.725~5.850)	802.11a	149	5745	11.89	12.00	Yes
		157	5785	11.80	12.00	Yes
		165	5825	11.76	12.00	Yes
	802.11n(HT20)	149	5745	11.83	12.00	No
		157	5785	11.82	12.00	No
		165	5825	11.77	12.00	No
	802.11n(HT40)	151	5755	11.83	12.00	No
		159	5795	11.82	12.00	No
	802.11ac(VHT20)	149	5745	11.89	12.00	No
		157	5785	11.85	12.00	No
		165	5825	11.91	12.00	No
	802.11ac(VHT40)	151	5755	11.79	12.00	No
		159	5795	11.81	12.00	No
	802.11ac(VHT80)	155	5775	11.89	12.00	No

8.8 LTE Downlink Carrier Aggregation Setup Configurations

LTE Carrier Aggregation (CA) was defined in 3GPP release 10 and higher. The LTE device in CA mode has one Primary Component Carrier (PCC) and one or more Secondary Component Carriers (SCC). PCC acts as the anchor carrier and can optionally cross-schedule data transmission on SCC. The RRC connection is only handled by one cell, the PCC for downlink and uplink communications. After making a data connection to the PCC, the LTE device adds the SCC on the downlink only. All uplink communications and acknowledgements remain identical to release 8 specifications on the PCC. The combinations of downlink carrier aggregation supported by this device are listed in below.

8.8.1 Downlink Intra-Band Bandwidth Combination sets for Contiguous CA

Downlink CA configuration	Component carriers in order of increasing carrier frequency		Maximum aggregated bandwidth [MHz]	Bandwidth combination set
	Channel bandwidths for carrier-1 [MHz]	Channel bandwidths for carrier-2 [MHz]		
CA_7B	15	5	20	0
CA_7C	15	15	40	0
	20	20		
	10	20	40	1
	15	15,20		
	20	10, 15, 20	40	2
	15	10,15		
20	15,20			
CA_38C	15	15	40	0
	20	20		
CA_41C	10	20	40	0
	15	15, 20		
	20	10, 15, 20		
	5, 10	20	40	1
	15	15, 20		
	20	5, 10, 15, 20	40	2
	10	15, 20		
	15	10, 15, 20		
	20	10, 15, 20	40	3
	10	20		
	20	20		

1.1.1 Downlink Intra-Band Bandwidth Combination sets for Non-Contiguous CA

Downlink CA configuration	Component carriers in order of increasing carrier frequency		Maximum aggregated bandwidth [MHz]	Bandwidth combination set
	Channel bandwidths for carrier-1 [MHz]	Channel bandwidths for carrier-2 [MHz]		
CA_7A-7A	5	15	40	0
	10	10, 15		
	15	15, 20		
	20	20		
	5, 10, 15, 20	5, 10, 15, 20	40	1
	5, 10, 15, 20	5, 10	30	2
	10, 15, 20	10, 15, 20	40	3
CA_41A-41A	10, 15, 20	10, 15, 20	40	0
	5, 10, 15, 20	5, 10, 15, 20	40	1

1.1.2 Downlink Bandwidth Combination Sets for Inter-Band CA(Two Bands)

Downlink CA Configuration	LTE Bands	Channel Bandwidths for Carrier [MHz]	Maximum Aggregated Bandwidth [MHz]	Bandwidth Combination Set
CA_5A-41A	5	5, 10	30	0
	41	20		

8.9 Power Confirmation for SAR test Exclusion for LTE Downlink CA

According to KDB 941225 D05A, the uplink maximum output power below was measured with downlink CA active on the channel with highest measured maximum output power when downlink CA is inactive. The downlink SCC channel was paired with the uplink channel as normal operation. For intra-band contiguous CA, the downlink channel spacing between the component carriers was set to multiple of 300 kHz less than the nominal channel spacing per section 5.4.1A of 3GPP TS36.521. For intra-band non-contiguous CA, the downlink channel spacing between the component carriers was set to maximum separation from PCC and remain fully within the downlink transmission band. For Inter-band CA, the SCC downlink channel was set to near the middle of its transmission band.

8.9.1 Power Reduction Full power for Intra-Band Contiguous Downlink CA

CA Combination	PCC								SCC1				Power(dBm)	
	LTE Band	BW (MHz)	UL Ch.	UL Freq. (MHz)	RB Size	RB Offset	DL Ch.	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Ch.	DL Freq. (MHz)	Single Carrier Tx Power	Tx Power with DL-CA Active
7C	7	20M	21100	2535	1	0	3100	2655	7	20M	3298	2674.8	23.40	23.16
7B	7	15M	21100	2535	1	0	3100	2655	7	5M	3007	2645.7	23.37	23.12
38C	38	20M	38150	2610	1	0	38150	2610	38	20M	37952	2590.2	23.62	23.15
41C	41	20M	41055	2636.5	1	49	41055	2636.5	41	20M	41253	2656.3	23.89	23.31

8.9.2 Power Reduction Full power for Intra-Band Non-Contiguous Downlink CA

CA Combination	PCC								SCC1				Power(dBm)	
	LTE Band	BW (MHz)	UL Ch.	UL Freq. (MHz)	RB Size	RB Offset	DL Ch.	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Ch.	DL Freq. (MHz)	Single Carrier Tx Power	Tx Power with DL-CA Active
7A-7A	7	20M	21100	2535	1	0	3100	2655	7	5M	3425	2687.5	23.40	23.11
41A-41A	41	20M	41055	2636.5	1	49	41055	2636.5	41	5M	39675	2498.5	23.89	23.25

8.9.3 Power Reduction Full power for Inter-Band Non-Contiguous Downlink CA (Two Band)

CA Combination	PCC								SCC1				Power(dBm)	
	LTE Band	BW (MHz)	UL Ch.	UL Freq. (MHz)	RB Size	RB Offset	DL Ch.	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Ch.	DL Freq. (MHz)	Single Carrier Tx Power	Tx Power with DL-CA Active
5A-41A	5	10M	20600	844.0	1	0	2600	889.0	41	20M	40620	2593	23.27	23.15

8.9.4 Power Reduction Level 1&2&3 for Intra-Band Contiguous Downlink CA

CA Combination	PCC								SCC1				Power(dBm)	
	LTE Band	BW (MHz)	UL Ch.	UL Freq. (MHz)	RB Size	RB Offset	DL Ch.	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Ch.	DL Freq. (MHz)	Single Carrier Tx Power	Tx Power with DL-CA Active
7C	7	20M	21100	2535	1	0	3100	2655	7	20M	3298	2674.8	15.93	15.77
7B	7	15M	21100	2535	1	0	3100	2655	7	5M	3007	2645.7	16.07	15.85
38C	38	20M	38150	2610	1	0	38150	2610	38	20M	37952	2590.2	19.18	18.86
41C	41	20M	41490	2680	1	99	41490	2680	41	20M	41292	2660.2	18.25	18.07

8.9.5 Power Reduction Level 1&2&3 for Intra-Band Non-Contiguous Downlink CA

CA Combination	PCC								SCC1				Power(dBm)	
	LTE Band	BW (MHz)	UL Ch.	UL Freq. (MHz)	RB Size	RB Offset	DL Ch.	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Ch.	DL Freq. (MHz)	Single Carrier Tx Power	Tx Power with DL-CA Active
7A-7A	7	20M	21100	2535	1	0	3100	2655	7	5M	3425	2687.5	15.93	15.69
41A-41A	41	20M	41490	2680	1	99	41490	2680	41	5M	39675	2498.5	18.25	18.96

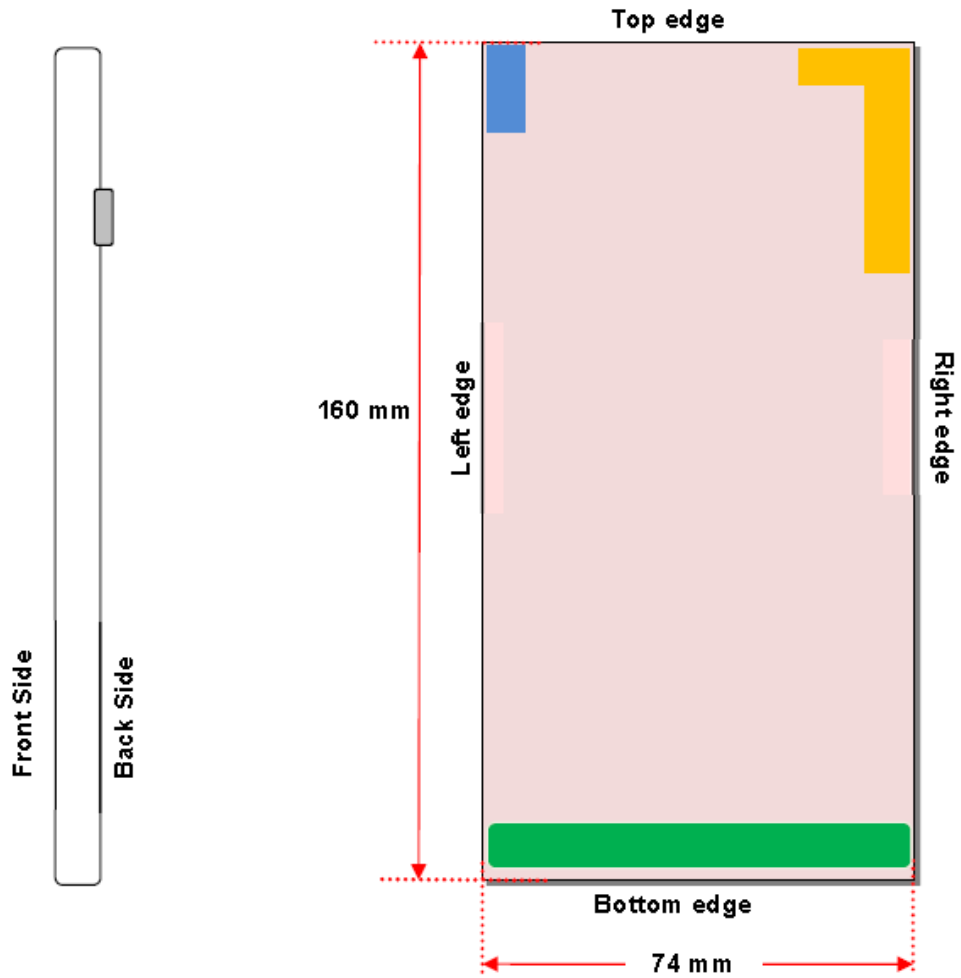
8.9.6 Power Reduction Level 1&2&3 for Inter-Band Non-Contiguous Downlink CA (Two Band)

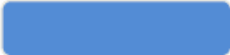



CA Combination	PCC								SCC1				Power(dBm)	
	LTE Band	BW (MHz)	UL Ch.	UL Freq. (MHz)	RB Size	RB Offset	DL Ch.	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Ch.	DL Freq. (MHz)	Single Carrier Tx Power	Tx Power with DL-CA Active
5A-41A	5	10M	20525	836.5	1	0	2525	881.5	41	20M	40620	2593	21.44	21.36

Note: Summary for SAR Test Exclusion for LTE Downlink CA

Per power confirmation results in above, the uplink maximum output power with downlink CA active remains within the specified tune-up tolerance and not more than 0.25 dB higher than the maximum output power with downlink CA inactive. According to KDB 941225 D05A, the SAR test exclusion applies to LTE downlink CA operation.

9 TEST EXCLUSION CONSIDERATION



-  WLAN/BT Antenna
-  WWAN Down Antenna
-  EUT Back View
-  WWAN Up Antenna

9.1 SAR Test Exclusion Consideration Table

According with FCC KDB 447498 D01, Appendix A, <SAR Test Exclusion Thresholds for 100 MHz - 6 GHz and ≤ 50 mm> Table, this Device SAR test configurations consider as following :

WWAN, WLAN and Bluetooth Up Antenna

Band	Mode	Max. Peak Power		Test Position Configurations					
		dBm	mW	Head	Front/ Back	Left Edge	Right Edge	Top Edge	Bottom Edge
GSM 850	Distance to User			<5mm	<5mm	>25mm	<5mm	<5mm	>25mm
	Voice	33.5	2238.72	No	No	No	No	No	No
	Data	33.5	2238.72	Yes	Yes	Yes	Yes	Yes	No
GSM 1900	Distance to User			<5mm	<5mm	>25mm	<5mm	<5mm	>25mm
	Voice	30.5	1122.02	No	No	No	No	No	No
	Data	30.5	1122.02	Yes	Yes	Yes	Yes	Yes	No
WCDMA Band 2	Distance to User			<5mm	<5mm	>25mm	<5mm	<5mm	>25mm
	RMC	24.5	281.84	Yes	Yes	Yes	Yes	Yes	No
WCDMA Band 4	Distance to User			<5mm	<5mm	>25mm	<5mm	<5mm	>25mm
	RMC	24.5	281.84	Yes	Yes	Yes	Yes	Yes	No
WCDMA Band 5	Distance to User			<5mm	<5mm	>25mm	<5mm	<5mm	>25mm
	RMC	24.5	281.84	Yes	Yes	Yes	Yes	Yes	No
LTE Band 2	Distance to User			<5mm	<5mm	>25mm	<5mm	<5mm	>25mm
	VOIP	24.0	251.12	Yes	Yes	Yes	Yes	Yes	No
LTE Band 4	Distance to User			<5mm	<5mm	>25mm	<5mm	<5mm	>25mm
	VOIP	24.0	251.12	Yes	Yes	Yes	Yes	Yes	No
LTE Band 5	Distance to User			<5mm	<5mm	>25mm	<5mm	<5mm	>25mm
	VOIP	24.5	281.84	Yes	Yes	Yes	Yes	Yes	No
LTE Band 7	Distance to User			<5mm	<5mm	>25mm	<5mm	<5mm	>25mm
	VOIP	24.0	251.12	Yes	Yes	Yes	Yes	Yes	No
LTE Band 26	Distance to User			<5mm	<5mm	>25mm	<5mm	<5mm	>25mm
	VOIP	24.5	281.84	Yes	Yes	Yes	Yes	Yes	No
LTE Band 38	Distance to User			<5mm	<5mm	>25mm	<5mm	<5mm	>25mm
	VOIP	24.0	251.12	Yes	Yes	Yes	Yes	Yes	No
LTE Band 41	Distance to User			<5mm	<5mm	>25mm	<5mm	<5mm	>25mm
	VOIP	24.5	281.84	Yes	Yes	Yes	Yes	Yes	No
WLAN 2.4 G	Distance to User			<5mm	<5mm	<5mm	>25mm	<5mm	>25mm
	802.11b	20.0	100.00	Yes	Yes	Yes	No	Yes	No
	802.11g	19.0	79.43	No	No	No	No	No	No
	802.11n(HT20)	19.0	79.43	No	No	No	No	No	No
WLAN 5.2 G	Distance to User			<5mm	<5mm	<5mm	>25mm	<5mm	>25mm
	802.11a	19.0	79.43	No	Yes	Yes	No	Yes	No
	802.11n(HT20)	19.0	79.43	No	No	No	No	No	No
	802.11n(HT40)	18.0	63.10	No	No	No	No	No	No
	802.11ac(VHT20)	19.0	79.43	No	No	No	No	No	No

	802.11ac(VHT40)	18.0	63.10	No	No	No	No	No	No
	802.11ac(VHT80)	11.0	12.59	No	No	No	No	No	No
WLAN 5.3 G	Distance to User			<5mm	<5mm	<5mm	>25mm	<5mm	>25mm
	802.11a	19.0	79.43	Yes	Yes	Yes	No	Yes	No
	802.11n(HT20)	19.0	79.43	No	No	No	No	No	No
	802.11n(HT40)	18.0	63.10	No	No	No	No	No	No
	802.11ac(VHT20)	19.0	79.43	No	No	No	No	No	No
	802.11ac(VHT40)	18.0	63.10	No	No	No	No	No	No
	802.11ac(VHT80)	12.0	15.85	No	No	No	No	No	No
WLAN 5.6 G	Distance to User			<5mm	<5mm	<5mm	>25mm	<5mm	>25mm
	802.11a	19.0	79.43	Yes	Yes	Yes	No	Yes	No
	802.11n(HT20)	19.0	79.43	No	No	No	No	No	No
	802.11n(HT40)	18.0	63.10	No	No	No	No	No	No
	802.11ac(VHT20)	19.0	79.43	No	No	No	No	No	No
	802.11ac(VHT40)	18.0	63.10	No	No	No	No	No	No
	802.11ac(VHT80)	12.0	15.85	No	No	No	No	No	No
WLAN 5.8 G	Distance to User			<5mm	<5mm	<5mm	>25mm	<5mm	>25mm
	802.11a	14.0	25.12	No	No	No	No	No	No
	802.11n(HT20)	14.0	25.12	No	No	No	No	No	No
	802.11n(HT40)	14.0	25.12	No	No	No	No	No	No
	802.11ac(VHT20)	14.0	25.12	No	No	No	No	No	No
	802.11ac(VHT40)	14.0	25.12	No	No	No	No	No	No
	802.11ac(VHT80)	14.0	25.12	Yes	Yes	Yes	No	Yes	No
Bluetooth	Distance to User			<5mm	<5mm	<5mm	>25mm	<5mm	>25mm
	BT	12.5	17.78	Yes	Yes	Yes	No	Yes	No

WWAN Down Antenna

Band	Mode	Max. Peak Power		Test Position Configurations					
		dBm	mW	Head	Front/Back	Left Edge	Right Edge	Top Edge	Bottom Edge
GSM 850	Distance to User		<5mm	<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	Voice	33.5	2238.72	No	No	No	No	No	No
	Data	33.5	2238.72	Yes	Yes	Yes	Yes	No	Yes
GSM 1900	Distance to User		<5mm	<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	Voice	30.5	1122.02	No	No	No	No	No	No
	Data	30.5	1122.02	Yes	Yes	Yes	Yes	No	Yes
WCDMA Band 2	Distance to User		<5mm	<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	RMC	24.5	281.84	Yes	Yes	Yes	Yes	No	Yes
WCDMA Band 4	Distance to User		<5mm	<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	RMC	24.5	281.84	Yes	Yes	Yes	Yes	No	Yes
WCDMA Band 5	Distance to User		<5mm	<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	RMC	24.5	281.84	Yes	Yes	Yes	Yes	No	Yes
LTE Band 2	Distance to User		<5mm	<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	VOIP	24.0	251.12	Yes	Yes	Yes	Yes	No	Yes
LTE Band 4	Distance to User		<5mm	<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	VOIP	24.0	251.12	Yes	Yes	Yes	Yes	No	Yes
LTE Band 5	Distance to User		<5mm	<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	VOIP	24.5	281.84	Yes	Yes	Yes	Yes	No	Yes
LTE Band 7	Distance to User		<5mm	<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	VOIP	24.0	251.12	Yes	Yes	Yes	Yes	No	Yes
LTE Band 26	Distance to User		<5mm	<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	VOIP	24.5	281.84	Yes	Yes	Yes	Yes	No	Yes
LTE Band 38	Distance to User		<5mm	<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	VOIP	24.0	251.12	Yes	Yes	Yes	Yes	No	Yes
LTE Band 41	Distance to User		<5mm	<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	VOIP	24.5	281.84	Yes	Yes	Yes	Yes	No	Yes

Note:

- Maximum power is the source-based time-average power and represents the maximum RF output power including tune-up tolerance among production units
- Per KDB 447498 D01, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
- Per KDB 447498 D01, standalone SAR test exclusion threshold is applied; If the distance of the antenna to the user is < 5mm, 5mm is used to determine SAR exclusion threshold
- Per KDB 447498 D01, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR}$$
 - f(GHz) is the RF channel transmit frequency in GHz
 - Power and distance are rounded to the nearest mW and mm before calculation
 - The result is rounded to one decimal place for comparison

- d. For < 50 mm distance, we just calculate mW of the exclusion threshold value (3.0) to do compare.
This formula is $[3.0] / [\sqrt{f(\text{GHz})}] \cdot [(\text{min. test separation distance, mm})] = \text{exclusion threshold of mW}$.
5. Per KDB 447498 D01, at 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following
 - a. [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · (f(MHz)/150)] mW, at 100 MHz to 1500 MHz
 - b. [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at > 1500 MHz and ≤ 6 GHz
 6. Per KDB 941225 D01, RMC 12.2kbps setting is used to evaluate SAR. If HSDPA /HSUPA /DC-HSDPA output power is < 0.25 dB higher than RMC12.2Kbps, or reported SAR with RMC 12.2kbps setting is ≤ 1.2 W/kg, HSDPA/HSUPA/DC-HSDPA SAR evaluation can be excluded.
 7. Per KDB 248227 D01, choose the highest output power channel to test SAR and determine further SAR exclusion.8. For each frequency band, testing at higher data rates and higher order modulations is not required when the maximum average output power for each of these configurations is less than 1/4dB higher than those measured at the lowest data rate
 8. Per KDB 248227 D01 SAR is not required for the following 2.4 GHz OFDM conditions.
 - a. When KDB Publication 447498 D01 SAR test exclusion applies to the OFDM configuration.
 - b. When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
 9. Per KDB 248227 D01 SAR is not required for the following U-NII-1 and U-NII-2A bands conditions.
 - a. When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.
 - b. When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest reported SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for the band with lower maximum output power in that test configuration; otherwise, each band is tested independently for SAR.

10 TEST RESULT

10.1 GSM 850

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.	
Head														
Up	Level1&2&3	GPRS (2slots)	Left Cheek	0	251	848.8	0.19	0.716	26.73	27.00	1.064	0.762	/	
	Level1&2&3		Left Tilt	0	251	848.8	-0.16	0.204	26.73	27.00	1.064	0.217	/	
	Level1&2&3		Right Cheek		0	251	848.8	0.05	1.120	26.73	27.00	1.064	1.192	1#
	Level1&2&3				0	128	824.2	0.12	0.509	26.10	27.00	1.230	0.626	/
	Level1&2&3				0	190	836.6	0.11	0.963	26.14	27.00	1.219	1.174	/
	Level1&2&3		Right Tilt	0	251	848.8	0.00	0.266	26.73	27.00	1.064	0.283	/	
Down	Off	GPRS (2slots)	Left Cheek	0	251	848.8	-0.08	0.272	30.63	31.00	1.089	0.296	/	
	Off		Left Tilt	0	251	848.8	0.16	0.134	30.63	31.00	1.089	0.146	/	
	Off		Right Cheek	0	251	848.8	0.04	0.244	30.63	31.00	1.089	0.266	/	
	Off		Right Tilt	0	251	848.8	0.00	0.165	30.63	31.00	1.089	0.180	/	
Body-worn Accessory&Hotspot														
Up	Off	GPRS (2slots)	Front Side	10	251	848.80	0.14	0.407	30.63	31.00	1.089	0.443	/	
	Off		Back Side	10	251	848.80	0.11	0.526	30.63	31.00	1.089	0.573	2#	
	Off		Left Edge	10	251	848.80	-0.02	0.004	30.63	31.00	1.089	0.004	/	
	Off		Right Edge	10	251	848.80	-0.04	0.504	30.63	31.00	1.089	0.549	/	
	Off		Top Edge	10	251	848.80	0.04	0.022	30.63	31.00	1.089	0.024	/	
Down	Off	GPRS (2slots)	Front Side	10	251	848.80	-0.08	0.176	30.63	31.00	1.089	0.192	/	
	Off		Back Side	10	251	848.80	-0.03	0.278	30.63	31.00	1.089	0.303	/	
	Off		Left Edge	10	251	848.80	-0.12	0.017	30.63	31.00	1.089	0.019	/	
	Off		Right Edge	10	251	848.80	-0.15	0.140	30.63	31.00	1.089	0.152	/	
	Off		Bottom Edge	10	251	848.80	-0.13	0.220	30.63	31.00	1.089	0.240	/	
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.2 GSM 1900

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.	
Head														
Up	Level1&2&3	GPRS (3slots)	Left Cheek	0	512	1850.20	0.06	0.475	27.00	27.50	1.122	0.533	/	
	Level1&2&3		Left Tilt	0	512	1850.20	-0.09	0.312	27.00	27.50	1.122	0.350	/	
	Level1&2&3		Right Cheek		0	512	1850.20	0.02	1.030	27.00	27.50	1.122	1.156	3#
	Level1&2&3				0	661	1880.00	0.13	0.963	26.89	27.50	1.151	1.108	/
	Level1&2&3				0	885	1909.80	0.00	0.925	26.76	27.50	1.186	1.097	/
	Level1&2&3		Right Tilt	0	512	1850.20	0.17	0.686	27.00	27.50	1.122	0.770	/	
Down	Off	GPRS (1slots)	Left Cheek	0	512	1850.20	0.12	0.049	29.67	30.50	1.211	0.059	/	
	Off		Left Tilt	0	512	1850.20	-0.06	0.030	29.67	30.50	1.211	0.036	/	
	Off		Right Cheek	0	512	1850.20	-0.08	0.064	29.67	30.50	1.211	0.077	/	
	Off		Right Tilt	0	512	1850.20	0.18	0.045	29.67	30.50	1.211	0.054	/	
Body-worn Accessory&Hotspot														
Up	Off	GPRS (1slots)	Front Side	10	512	1850.20	0.12	0.204	29.67	30.50	1.211	0.247	/	
	Off		Back Side	10	512	1850.20	0.01	0.277	29.67	30.50	1.211	0.335	4#	
	Off		Left Edge	10	512	1850.20	-0.02	0.009	29.67	30.50	1.211	0.011	/	
	Off		Right Edge	10	512	1850.20	0.11	0.218	29.67	30.50	1.211	0.264	/	
	Off		Top Edge	10	512	1850.20	0.04	0.236	29.67	30.50	1.211	0.286	/	
Down	Off	GPRS (1slots)	Front Side	10	512	1850.20	0.10	0.138	29.67	30.50	1.211	0.167	/	
	Off		Back Side	10	512	1850.20	0.13	0.175	29.67	30.50	1.211	0.212	/	
	Off		Left Edge	10	512	1850.20	-0.02	0.026	29.67	30.50	1.211	0.031	/	
	Off		Right Edge	10	512	1850.20	0.07	0.087	29.67	30.50	1.211	0.105	/	
	Off		Bottom Edge	10	512	1850.20	0.03	0.263	29.67	30.50	1.211	0.318	/	
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.3WCDMA Band 2

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head													
Up	Level1&2&3	RMC	Left Cheek	0	9538	1907.60	0.18	0.309	19.38	20.00	1.153	0.356	/
	Level1&2&3		Left Tilt	0	9538	1907.60	-0.05	0.246	19.38	20.00	1.153	0.284	/
	Level1&2&3		Right Cheek	0	9538	1907.60	-0.19	0.843	19.38	20.00	1.153	0.972	/
	Level1&2&3				9262	1852.40	-0.01	0.727	19.16	20.00	1.213	0.882	/
	Level1&2&3				9400	1880.00	-0.06	0.832	19.00	20.00	1.259	1.047	5#
	Level1&2&3		Right Tilt	0	9538	1907.60	0.02	0.545	19.38	20.00	1.153	0.629	/
Down	Off	RMC	Left Cheek	0	9400	1880.00	0.09	0.127	23.84	24.50	1.164	0.148	/
	Off		Left Tilt	0	9400	1880.00	0.09	0.105	23.84	24.50	1.164	0.122	/
	Off		Right Cheek	0	9400	1880.00	-0.19	0.166	23.84	24.50	1.164	0.193	/
	Off		Right Tilt	0	9400	1880.00	-0.14	0.123	23.84	24.50	1.164	0.143	/
Body-worn Accessory&Hotspot													
Up	Off	RMC	Front Side	10	9400	1880.00	0.18	0.479	23.84	24.50	1.164	0.558	/
	Off		Back Side	10	9400	1880.00	0.02	0.654	23.84	24.50	1.164	0.761	/
	Off		Left Edge	10	9400	1880.00	-0.12	0.048	23.84	24.50	1.164	0.056	/
	Off		Right Edge	10	9400	1880.00	-0.16	0.386	23.84	24.50	1.164	0.449	/
	Off		Top Edge	10	9400	1880.00	0.12	0.379	23.84	24.50	1.164	0.441	/
Down	Off	RMC	Front Side	10	9400	1880.00	0.17	0.372	23.84	24.50	1.164	0.433	/
	Off		Back Side	10	9400	1880.00	0.20	0.429	23.84	24.50	1.164	0.499	/
	Off		Left Edge	10	9400	1880.00	0.00	0.287	23.84	24.50	1.164	0.334	/
	Off		Right Edge	10	9400	1880.00	0.13	0.069	23.84	24.50	1.164	0.080	/
	Off		Bottom Edge	10	9400	1880.00	0.03	0.657	23.84	24.50	1.164	0.765	6#
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

10.4WCDMA Band 4

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head													
Up	Level1&2&3	RMC	Left Cheek	0	1412	1732.40	0.15	0.288	19.70	20.50	1.202	0.346	/
	Level1&2&3		Left Tilt	0	1412	1732.40	0.06	0.220	19.70	20.50	1.202	0.264	/
	Level1&2&3		Right Cheek	0	1412	1732.40	-0.14	0.858	19.70	20.50	1.202	1.032	7#
	Level1&2&3			0	1312	1712.40	-0.12	0.801	19.58	20.50	1.236	0.990	/
	Level1&2&3			0	1513	1752.60	-0.14	0.823	19.66	20.50	1.213	0.999	/
	Level1&2&3		Right Tilt	0	1412	1732.40	0.01	0.557	19.70	20.50	1.202	0.670	/
Down	Off	RMC	Left Cheek	0	1513	1752.60	0.08	0.069	23.95	24.50	1.135	0.078	/
	Off		Left Tilt	0	1513	1752.60	0.16	0.052	23.95	24.50	1.135	0.059	/
	Off		Right Cheek	0	1513	1752.60	0.17	0.088	23.95	24.50	1.135	0.100	/
	Off		Right Tilt	0	1513	1752.60	-0.18	0.054	23.95	24.50	1.135	0.061	/
Body-worn Accessory&Hotspot													
Up	Off	RMC	Front Side	10	1513	1752.60	0.05	0.270	23.95	24.50	1.135	0.306	/
	Off		Back Side	10	1513	1752.60	0.11	0.408	23.95	24.50	1.135	0.463	/
	Off		Left Edge	10	1513	1752.60	0.16	0.052	23.95	24.50	1.135	0.059	/
	Off		Right Edge	10	1513	1752.60	0.17	0.337	23.95	24.50	1.135	0.382	/
	Off		Top Edge	10	1513	1752.60	-0.08	0.303	23.95	24.50	1.135	0.344	/
Down	Off	RMC	Front Side	10	1513	1752.60	0.04	0.346	23.95	24.50	1.135	0.393	/
	Off		Back Side	10	1513	1752.60	-0.17	0.421	23.95	24.50	1.135	0.478	/
	Off		Left Edge	10	1513	1752.60	-0.12	0.268	23.95	24.50	1.135	0.304	/
	Off		Right Edge	10	1513	1752.60	0.03	0.074	23.95	24.50	1.135	0.084	/
	Off		Bottom Edge	10	1513	1752.60	0.03	0.630	23.95	24.50	1.135	0.715	8#
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

10.5WCDMA Band 5

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head													
Up	Level1&2&3	RMC	Left Cheek	0	4233	846.60	0.16	0.561	21.47	22.50	1.268	0.711	/
	Level1&2&3		Left Tilt	0	4233	846.60	0.03	0.123	21.47	22.50	1.268	0.156	/
	Level1&2&3		Right Cheek	0	4233	846.60	-0.07	0.766	21.47	22.50	1.268	0.971	9#
	Level1&2&3			0	4132	826.40	-0.11	0.539	21.39	22.50	1.291	0.696	/
	Level1&2&3			0	4182	836.40	0.07	0.677	21.26	22.50	1.330	0.901	/
	Level1&2&3		Right Tilt	0	4233	846.60	0.10	0.168	21.47	22.50	1.268	0.213	/
Down	Off	RMC	Left Cheek	0	4233	846.60	0.09	0.184	23.34	24.50	1.306	0.240	/
	Off		Left Tilt	0	4233	846.60	0.01	0.073	23.34	24.50	1.306	0.095	/
	Off		Right Cheek	0	4233	846.60	-0.14	0.226	23.34	24.50	1.306	0.295	/
	Off		Right Tilt	0	4233	846.60	-0.20	0.080	23.34	24.50	1.306	0.104	/
Body-worn Accessory&Hotspot													
Up	Off	RMC	Front Side	10	4233	846.60	-0.06	0.346	23.34	24.50	1.306	0.452	/
	Off		Back Side	10	4233	846.60	0.05	0.522	23.34	24.50	1.306	0.682	10#
	Off		Left Edge	10	4233	846.60	0.15	0.006	23.34	24.50	1.306	0.008	/
	Off		Right Edge	10	4233	846.60	0.17	0.413	23.34	24.50	1.306	0.539	/
	Off		Top Edge	10	4233	846.60	0.09	0.029	23.34	24.50	1.306	0.038	/
Down	Off	RMC	Front Side	10	4233	846.60	0.02	0.251	23.34	24.50	1.306	0.328	/
	Off		Back Side	10	4233	846.60	0.01	0.345	23.34	24.50	1.306	0.451	/
	Off		Left Edge	10	4233	846.60	-0.17	0.014	23.34	24.50	1.306	0.018	/
	Off		Right Edge	10	4233	846.60	-0.10	0.186	23.34	24.50	1.306	0.243	/
	Off		Bottom Edge	10	4233	846.60	0.13	0.267	23.34	24.50	1.306	0.349	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

10.6LTE Band 2 (20MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head															
Up	Level1&2&3	QPSK	Left Cheek	0	18700	1860	1	Low	0.10	0.272	18.56	19.00	1.107	0.301	/
	Level1&2&3			0	18900	1880	50	High	0.00	0.257	18.43	19.00	1.140	0.293	/
	Level1&2&3		Left Tilt	0	18700	1860	1	Low	0.01	0.223	18.56	19.00	1.107	0.247	/
	Level1&2&3			0	18900	1880	50	High	0.04	0.206	18.43	19.00	1.140	0.235	/
	Level1&2&3		Right Cheek	0	18700	1860	1	Low	-0.05	0.719	18.56	19.00	1.107	0.796	11#
	Level1&2&3			0	18900	1880	50	High	0.01	0.689	18.43	19.00	1.140	0.786	/
	Level1&2&3		Right Tilt	0	18700	1860	1	Low	-0.09	0.438	18.56	19.00	1.107	0.485	/
	Level1&2&3			0	18900	1880	50	High	-0.04	0.415	18.43	19.00	1.140	0.473	/
Up	Off	QPSK	Left Cheek	0	18900	1880	1	Low	0.03	0.084	23.55	24.00	1.109	0.093	/
	Off			0	18900	1880	50	Low	-0.03	0.066	22.47	23.00	1.130	0.075	/
	Off		Left Tilt	0	18900	1880	1	Low	0.11	0.067	23.55	24.00	1.109	0.074	/
	Off			0	18900	1880	50	Low	-0.19	0.053	22.47	23.00	1.130	0.060	/
	Off		Right Cheek	0	18900	1880	1	Low	-0.08	0.104	23.55	24.00	1.109	0.115	/
	Off			0	18900	1880	50	Low	-0.07	0.082	22.47	23.00	1.130	0.093	/
	Off		Right Tilt	0	18900	1880	1	Low	0.16	0.073	23.55	24.00	1.109	0.081	/
	Off			0	18900	1880	50	Low	-0.01	0.058	22.47	23.00	1.130	0.066	/
Body-worn Accessory&Hotspot															
Up	Off	QPSK	Front Side	10	18900	1880	1	Low	0.10	0.308	23.55	24.00	1.109	0.342	/
	Off			10	18900	1880	50	Low	0.09	0.235	22.47	23.00	1.130	0.266	/
	Off		Back Side	10	18900	1880	1	Low	0.02	0.422	23.55	24.00	1.109	0.468	/
	Off			10	18900	1880	50	Low	-0.05	0.346	22.47	23.00	1.130	0.391	/
	Off		Left Edge	10	18900	1880	1	Low	0.04	0.037	23.55	24.00	1.109	0.041	/
	Off			10	18900	1880	50	Low	0.10	0.022	22.47	23.00	1.130	0.025	/
	Off		Right Edge	10	18900	1880	1	Low	0.13	0.360	23.55	24.00	1.109	0.399	/
	Off			10	18900	1880	50	Low	0.11	0.267	22.47	23.00	1.130	0.302	/
	Off		Top Edge	10	18900	1880	1	Low	0.10	0.307	23.55	24.00	1.109	0.341	/
	Off			10	18900	1880	50	Low	0.17	0.248	22.47	23.00	1.130	0.280	/
Down	Off	QPSK	Front Side	10	18900	1880	1	Low	-0.15	0.243	23.55	24.00	1.109	0.270	/
	Off			10	18900	1880	50	Low	-0.06	0.185	22.47	23.00	1.130	0.209	/
	Off		Back Side	10	18900	1880	1	Low	0.01	0.365	23.55	24.00	1.109	0.405	/
	Off			10	18900	1880	50	Low	-0.19	0.274	22.47	23.00	1.130	0.310	/
	Off		Left Edge	10	18900	1880	1	Low	0.01	0.159	23.55	24.00	1.109	0.176	/
	Off			10	18900	1880	50	Low	0.20	0.133	22.47	23.00	1.130	0.150	/
	Off		Right Edge	10	18900	1880	1	Low	0.03	0.063	23.55	24.00	1.109	0.070	/
	Off			10	18900	1880	50	Low	0.08	0.052	22.47	23.00	1.130	0.059	/
	Off		Bottom Edge	10	18900	1880	1	Low	0.00	0.582	23.55	24.00	1.109	0.646	12#
	Off			10	18900	1880	50	Low	0.15	0.426	22.47	23.00	1.130	0.481	/

Note: Refer to ANNEX C for the detailed test data for each test configuration.

10.7LTE Band 4 (20MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head															
Up	Level1&2&3	QPSK	Left Cheek	0	20175	1732.5	1	Low	-0.18	0.276	19.09	20.00	1.233	0.340	/
	Level1&2&3			0	20175	1732.5	50	Low	0.16	0.288	19.15	20.00	1.216	0.350	/
	Level1&2&3		Left Tilt	0	20175	1732.5	1	Low	0.10	0.203	19.09	20.00	1.233	0.250	/
	Level1&2&3			0	20175	1732.5	50	Low	0.03	0.235	19.15	20.00	1.216	0.286	/
	Level1&2&3		Right Cheek	0	20175	1732.5	1	Low	-0.09	0.736	19.09	20.00	1.233	0.908	/
	Level1&2&3			0	20050	1720	1	Low	0.07	0.764	19.07	20.00	1.239	0.946	/
	Level1&2&3			0	20300	1745	1	Low	-0.09	0.804	19.07	20.00	1.239	0.996	/
	Level1&2&3			0	20175	1732.5	50	Low	-0.18	0.775	19.15	20.00	1.216	0.943	/
	Level1&2&3			0	20050	1720	50	Low	-0.02	0.787	19.07	20.00	1.239	0.975	/
	Level1&2&3			0	20300	1745	50	Low	0.00	0.822	19.08	20.00	1.236	1.016	13#
	Level1&2&3		Right Tilt	0	20175	1732.5	100	Low	0.16	0.695	19.06	20.00	1.242	0.863	/
	Level1&2&3			0	20175	1732.5	1	Low	-0.14	0.518	19.09	20.00	1.233	0.639	/
	Level1&2&3		0	20175	1732.5	50	Low	-0.17	0.540	19.15	20.00	1.216	0.657	/	
	Up		Off	QPSK	Left Cheek	0	20175	1732.5	1	Low	-0.04	0.058	23.32	24.00	1.169
Off		0	20300			1745	50	Mid	0.10	0.043	22.35	23.00	1.161	0.050	/
Off		Left Tilt	0		20175	1732.5	1	Low	-0.15	0.046	23.32	24.00	1.169	0.054	/
Off			0		20300	1745	50	Mid	0.04	0.038	22.35	23.00	1.161	0.044	/
Off		Right Cheek	0		20175	1732.5	1	Low	0.09	0.089	23.32	24.00	1.169	0.104	/
Off			0		20300	1745	50	Mid	0.02	0.072	22.35	23.00	1.161	0.084	/
Off		Right Tilt	0		20175	1732.5	1	Low	-0.07	0.063	23.32	24.00	1.169	0.074	/
Off			0		20300	1745	50	Mid	0.20	0.053	22.35	23.00	1.161	0.062	/
Body-worn Accessory&Hotspot															
Up	Off	QPSK	Front Side	10	20175	1732.5	1	Low	-0.10	0.351	23.32	24.00	1.169	0.410	/
	Off			10	20300	1745	50	Mid	0.01	0.266	22.35	23.00	1.161	0.309	/
	Off		Back Side	10	20175	1732.5	1	Low	0.04	0.445	23.32	24.00	1.169	0.520	/
	Off			10	20300	1745	50	Mid	0.03	0.356	22.35	23.00	1.161	0.413	/
	Off		Left Edge	10	20175	1732.5	1	Low	-0.20	0.050	23.32	24.00	1.169	0.058	/
	Off			10	20300	1745	50	Mid	-0.14	0.042	22.35	23.00	1.161	0.049	/
	Off		Right Edge	10	20175	1732.5	1	Low	0.01	0.364	23.32	24.00	1.169	0.426	/
	Off			10	20300	1745	50	Mid	0.05	0.274	22.35	23.00	1.161	0.318	/
	Off		Top Edge	10	20175	1732.5	1	Low	0.16	0.243	23.32	24.00	1.169	0.284	/
	Off			10	20300	1745	50	Mid	-0.08	0.185	22.35	23.00	1.161	0.215	/
Down	Off	QPSK	Front Side	10	20175	1732.5	1	Low	0.08	0.246	23.32	24.00	1.169	0.288	/
	Off			10	20300	1745	50	Mid	0.09	0.185	22.35	23.00	1.161	0.215	/
	Off		Back Side	10	20175	1732.5	1	Low	0.10	0.305	23.32	24.00	1.169	0.357	/
	Off			10	20300	1745	50	Mid	0.20	0.232	22.35	23.00	1.161	0.269	/
	Off		Left Edge	10	20175	1732.5	1	Low	0.14	0.142	23.32	24.00	1.169	0.166	/
	Off			10	20300	1745	50	Mid	-0.11	0.106	22.35	23.00	1.161	0.123	/
	Off		Right Edge	10	20175	1732.5	1	Low	-0.06	0.071	23.32	24.00	1.169	0.083	/

	Off			10	20300	1745	50	Mid	-0.19	0.063	22.35	23.00	1.161	0.073	/
	Off		Bottom Edge	10	20175	1732.5	1	Low	0.07	0.559	23.32	24.00	1.169	0.654	14#
	Off			10	20300	1745	50	Mid	-0.08	0.428	22.35	23.00	1.161	0.497	/

Note: Refer to ANNEX C for the detailed test data for each test configuration.

10.8LTE Band 5 (10MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head															
Up	Level1&2&3	QPSK	Left Cheek	0	20525	836.5	1	Low	0.18	0.356	21.44	22.50	1.276	0.454	/
	Level1&2&3			0	20525	836.5	25	Low	0.12	0.372	21.42	22.50	1.282	0.477	/
	Level1&2&3		Left Tilt	0	20525	836.5	1	Low	0.13	0.077	21.44	22.50	1.276	0.098	/
	Level1&2&3			0	20525	836.5	25	Low	0.17	0.084	21.42	22.50	1.282	0.108	/
	Level1&2&3		Right Cheek	0	20525	836.5	1	Low	0.19	0.508	21.44	22.50	1.276	0.648	/
	Level1&2&3			0	20525	836.5	25	Low	0.01	0.533	21.42	22.50	1.282	0.683	15#
	Level1&2&3		Right Tilt	0	20525	836.5	1	Low	0.20	0.097	21.44	22.50	1.276	0.124	/
	Level1&2&3			0	20525	836.5	25	Low	0.09	0.112	21.42	22.50	1.282	0.144	/
Up	Off	QPSK	Left Cheek	0	20600	844	1	Low	0.01	0.168	23.27	24.50	1.327	0.223	/
	Off			0	20450	829	25	Mid	0.16	0.136	22.27	23.50	1.327	0.181	/
	Off		Left Tilt	0	20600	844	1	Low	-0.15	0.078	23.27	24.50	1.327	0.104	/
	Off			0	20450	829	25	Mid	0.06	0.062	22.27	23.50	1.327	0.082	/
	Off		Right Cheek	0	20600	844	1	Low	0.20	0.133	23.27	24.50	1.327	0.177	/
	Off			0	20450	829	25	Mid	0.16	0.112	22.27	23.50	1.327	0.149	/
	Off		Right Tilt	0	20600	844	1	Low	-0.13	0.075	23.27	24.50	1.327	0.100	/
	Off			0	20450	829	25	Mid	0.06	0.061	22.27	23.50	1.327	0.081	/
Body-worn Accessory&Hotspot															
Up	Off	QPSK	Front Side	10	20600	844	1	Low	0.02	0.204	23.27	24.50	1.327	0.271	/
	Off			10	20450	829	25	Mid	-0.12	0.165	22.27	23.50	1.327	0.219	/
	Off		Back Side	10	20600	844	1	Low	0.06	0.392	23.27	24.50	1.327	0.520	/
	Off			10	20450	829	25	Mid	0.06	0.313	22.27	23.50	1.327	0.415	/
	Off		Left Edge	10	20600	844	1	Low	0.04	0.007	23.27	24.50	1.327	0.009	/
	Off			10	20450	829	25	Mid	-0.10	0.006	22.27	23.50	1.327	0.008	/
	Off		Right Edge	10	20600	844	1	Low	0.13	0.411	23.27	24.50	1.327	0.546	16#
	Off			10	20450	829	25	Mid	-0.09	0.318	22.27	23.50	1.327	0.422	/
	Off		Top Edge	10	20600	844	1	Low	-0.05	0.018	23.27	24.50	1.327	0.024	/
	Off			10	20450	829	25	Mid	0.17	0.015	22.27	23.50	1.327	0.020	/
Down	Off	QPSK	Front Side	10	20600	844	1	Low	-0.18	0.152	23.27	24.50	1.327	0.202	/
	Off			10	20450	829	25	Mid	-0.10	0.114	22.27	23.50	1.327	0.151	/
	Off		Back Side	10	20600	844	1	Low	0.00	0.231	23.27	24.50	1.327	0.307	/
	Off			10	20450	829	25	Mid	0.16	0.178	22.27	23.50	1.327	0.236	/
	Off		Left Edge	10	20600	844	1	Low	0.10	0.015	23.27	24.50	1.327	0.020	/
	Off			10	20450	829	25	Mid	-0.12	0.013	22.27	23.50	1.327	0.017	/

	Off		Right Edge	10	20600	844	1	Low	-0.10	0.109	23.27	24.50	1.327	0.145	/
	Off			10	20450	829	25	Mid	0.00	0.082	22.27	23.50	1.327	0.109	/
	Off		Bottom Edge	10	20600	844	1	Low	0.01	0.173	23.27	24.50	1.327	0.230	/
	Off			10	20450	829	25	Mid	0.15	0.134	22.27	23.50	1.327	0.178	/

Note: Refer to ANNEX C for the detailed test data for each test configuration.

10.9LTE Band 7 (20MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head															
Up	Level1&2&3	QPSK	Left Cheek	0	21100	2535	1	Low	-0.04	0.239	15.93	17.00	1.279	0.306	/
	Level1&2&3			0	21350	2560	50	Mid	-0.20	0.188	15.91	17.00	1.285	0.242	/
	Level1&2&3		Left Tilt	0	21100	2535	1	Low	-0.01	0.174	15.93	17.00	1.279	0.223	/
	Level1&2&3			0	21350	2560	50	Mid	-0.16	0.132	15.91	17.00	1.285	0.170	/
	Level1&2&3		Right Cheek	0	21100	2535	1	Low	0.03	0.711	15.93	17.00	1.279	0.910	17#
	Level1&2&3			0	20850	2510	1	Low	0.05	0.687	15.80	17.00	1.318	0.906	/
	Level1&2&3			0	21350	2560	1	Low	-0.11	0.666	15.90	17.00	1.288	0.858	/
	Level1&2&3			0	21350	2560	50	Mid	0.19	0.603	15.91	17.00	1.285	0.775	/
	Level1&2&3		Right Tilt	0	21350	2535	100	Low	-0.01	0.707	15.91	17.00	1.285	0.909	/
	Level1&2&3			0	21100	2535	1	Low	-0.03	0.548	15.93	17.00	1.279	0.701	/
	Level1&2&3		0	21350	2560	50	Mid	-0.11	0.482	15.91	17.00	1.285	0.620	/	
	Up		Off	QPSK	Left Cheek	0	21100	2535	1	Low	0.14	0.112	23.40	24.00	1.148
Off		0	21100			2535	50	Low	-0.06	0.078	22.41	23.00	1.146	0.089	/
Off		Left Tilt	0		21100	2535	1	Low	0.03	0.087	23.40	24.00	1.148	0.100	/
Off			0		21100	2535	50	Low	0.18	0.061	22.41	23.00	1.146	0.070	/
Off		Right Cheek	0		21100	2535	1	Low	0.07	0.128	23.40	24.00	1.148	0.147	/
Off			0		21100	2535	50	Low	-0.20	0.094	22.41	23.00	1.146	0.108	/
Off		Right Tilt	0		21100	2535	1	Low	-0.16	0.077	23.40	24.00	1.148	0.088	/
Off			0		21100	2535	50	Low	-0.07	0.062	22.41	23.00	1.146	0.071	/
Body-worn Accessory&Hotspot															
Up	Off	QPSK	Front Side	10	21100	2535	1	Low	0.06	0.663	23.40	24.00	1.148	0.761	/
	Off			10	21100	2535	50	Low	0.20	0.516	22.41	23.00	1.146	0.591	/
	Off		Back Side	10	21100	2535	1	Low	0.09	0.761	23.40	24.00	1.148	0.874	18#
	Off			10	20850	2510	1	Low	0.07	0.714	23.15	24.00	1.216	0.868	/
	Off			10	21350	2560	1	Low	0.02	0.732	23.25	24.00	1.189	0.870	/
	Off			10	21100	2535	50	Low	-0.09	0.624	22.41	23.00	1.146	0.715	/
	Off		Left Edge	10	21100	2535	100	Low	0.13	0.611	22.29	23.00	1.178	0.720	/
	Off			10	21100	2535	1	Low	-0.03	0.014	23.40	24.00	1.148	0.016	/
	Off		Right Edge	10	21100	2535	50	Low	0.10	0.012	22.41	23.00	1.146	0.014	/
	Off			10	21100	2535	1	Low	0.20	0.528	23.40	24.00	1.148	0.606	/
	Off		Top Edge	10	21100	2535	50	Low	-0.18	0.407	22.41	23.00	1.146	0.466	/
	Off			10	21100	2535	1	Low	-0.02	0.361	23.40	24.00	1.148	0.414	/

	Off			10	21100	2535	50	Low	0.02	0.255	22.41	23.00	1.146	0.292	/
Down	Off	QPSK	Front Side	10	21100	2535	1	Low	-0.12	0.278	23.40	24.00	1.148	0.319	/
	Off			10	21100	2535	50	Low	-0.14	0.215	22.41	23.00	1.146	0.246	/
	Off		Back Side	10	21100	2535	1	Low	-0.15	0.338	23.40	24.00	1.148	0.388	/
	Off			10	21100	2535	50	Low	0.17	0.272	22.41	23.00	1.146	0.312	/
	Off		Left Edge	10	21100	2535	1	Low	-0.13	0.141	23.40	24.00	1.148	0.162	/
	Off			10	21100	2535	50	Low	0.18	0.104	22.41	23.00	1.146	0.119	/
	Off		Right Edge	10	21100	2535	1	Low	0.19	0.010	23.40	24.00	1.148	0.011	/
	Off			10	21100	2535	50	Low	-0.05	0.008	22.41	23.00	1.146	0.009	/
	Off		Bottom Edge	10	21100	2535	1	Low	-0.07	0.440	23.40	24.00	1.148	0.505	/
	Off			10	21100	2535	50	Low	-0.14	0.339	22.41	23.00	1.146	0.388	/

Note: Refer to ANNEX C for the detailed test data for each test configuration.

10.10 LTE Band 26 (15MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head															
Up	Level1&2&3	QPSK	Left Cheek	0	26965	841.5	1	High	-0.10	0.485	21.64	22.50	1.219	0.591	/
	Level1&2&3			0	26965	841.5	36	High	-0.13	0.497	21.60	22.50	1.230	0.611	/
	Level1&2&3		Left Tilt	0	26965	841.5	1	High	0.11	0.117	21.64	22.50	1.219	0.143	/
	Level1&2&3			0	26965	841.5	36	High	0.08	0.126	21.60	22.50	1.230	0.155	/
	Level1&2&3		Right Cheek	0	26965	841.5	1	High	-0.02	0.641	21.64	22.50	1.219	0.781	/
	Level1&2&3			0	26965	841.5	36	High	0.01	0.684	21.60	22.50	1.230	0.842	19#
	Level1&2&3			0	26765	821.5	36	Low	-0.20	0.538	21.52	22.50	1.253	0.674	/
	Level1&2&3			0	26865	831.5	36	High	0.15	0.630	21.58	22.50	1.236	0.779	/
	Level1&2&3		Right Tilt	0	26865	831.5	100	Low	0.16	0.627	21.60	22.50	1.230	0.771	/
	Level1&2&3			0	26965	841.5	1	High	-0.10	0.146	21.64	22.50	1.219	0.178	/
Level1&2&3	0	26965	841.5	36	High	-0.08	0.177	21.60	22.50	1.230	0.218	/			
Up	Off	QPSK	Left Cheek	0	26965	841.5	1	Low	0.11	0.148	23.54	24.50	1.247	0.185	/
	Off			0	26965	841.5	36	Low	0.04	0.126	22.47	23.50	1.268	0.160	/
	Off		Left Tilt	0	26965	841.5	1	Low	-0.08	0.066	23.54	24.50	1.247	0.082	/
	Off			0	26965	841.5	36	Low	0.16	0.057	22.47	23.50	1.268	0.072	/
	Off		Right Cheek	0	26965	841.5	1	Low	0.04	0.118	23.54	24.50	1.247	0.147	/
	Off			0	26965	841.5	36	Low	-0.06	0.102	22.47	23.50	1.268	0.129	/
	Off		Right Tilt	0	26965	841.5	1	Low	-0.01	0.063	23.54	24.50	1.247	0.079	/
	Off			0	26965	841.5	36	Low	0.10	0.054	22.47	23.50	1.268	0.068	/
Body-worn Accessory&Hotspot															
Up	Off	QPSK	Front Side	10	26965	841.5	1	Low	-0.03	0.308	23.54	24.50	1.247	0.384	/
	Off			10	26965	841.5	36	Low	0.01	0.242	22.47	23.50	1.268	0.307	/
	Off		Back Side	10	26965	841.5	1	Low	-0.01	0.417	23.54	24.50	1.247	0.520	20#
	Off			10	26965	841.5	36	Low	-0.02	0.374	22.47	23.50	1.268	0.474	/
	Off		Left Edge	10	26965	841.5	1	Low	0.17	0.004	23.54	24.50	1.247	0.005	/

	Off		Right Edge	10	26965	841.5	36	Low	0.19	0.004	22.47	23.50	1.268	0.005	/	
	Off			10	26965	841.5	1	Low	0.09	0.303	23.54	24.50	1.247	0.378	/	
	Off			10	26965	841.5	36	Low	0.01	0.236	22.47	23.50	1.268	0.299	/	
	Off			Top Edge	10	26965	841.5	1	Low	-0.04	0.018	23.54	24.50	1.247	0.022	/
	Off				10	26965	841.5	36	Low	0.13	0.015	22.47	23.50	1.268	0.019	/
Down	Off	QPSK	Front Side	10	26965	841.5	1	Low	0.16	0.206	23.54	24.50	1.247	0.257	/	
	Off			10	26965	841.5	36	Low	0.10	0.168	22.47	23.50	1.268	0.213	/	
	Off		Back Side	10	26965	841.5	1	Low	0.08	0.290	23.54	24.50	1.247	0.362	/	
	Off			10	26965	841.5	36	Low	-0.19	0.246	22.47	23.50	1.268	0.312	/	
	Off		Left Edge	10	26965	841.5	1	Low	0.15	0.010	23.54	24.50	1.247	0.012	/	
	Off			10	26965	841.5	36	Low	0.17	0.007	22.47	23.50	1.268	0.009	/	
	Off		Right Edge	10	26965	841.5	1	Low	0.14	0.112	23.54	24.50	1.247	0.140	/	
	Off			10	26965	841.5	36	Low	0.14	0.094	22.47	23.50	1.268	0.119	/	
	Off		Bottom Edge	10	26965	841.5	1	Low	0.08	0.176	23.54	24.50	1.247	0.220	/	
	Off			10	26965	841.5	36	Low	-0.02	0.145	22.47	23.50	1.268	0.184	/	

Note: Refer to ANNEX C for the detailed test data for each test configuration.

10.11 LTE Band 38 (20MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head															
Up	Level1&2&3	QPSK	Left Cheek	0	38150	2610	1	Low	-0.08	0.264	19.18	20.00	1.208	0.319	/
	Level1&2&3			0	38000	2595	50	Low	-0.06	0.283	19.11	20.00	1.227	0.347	/
	Level1&2&3		Left Tilt	0	38150	2610	1	Low	-0.12	0.175	19.18	20.00	1.208	0.211	/
	Level1&2&3			0	38000	2595	50	Low	0.13	0.188	19.11	20.00	1.227	0.231	/
	Level1&2&3		Right Cheek	0	38150	2610	1	Low	0.12	0.796	19.18	20.00	1.208	0.961	/
	Level1&2&3			0	37850	2580	1	Low	-0.11	0.765	18.91	20.00	1.285	0.983	/
	Level1&2&3			0	38000	2595	1	Low	0.11	0.784	19.06	20.00	1.242	0.973	/
	Level1&2&3			0	38000	2595	50	Low	-0.05	0.803	19.11	20.00	1.227	0.986	/
	Level1&2&3			0	37850	2580	50	Mid	0.19	0.764	19.02	20.00	1.253	0.957	/
	Level1&2&3			0	38150	2610	50	Low	-0.14	0.792	19.05	20.00	1.245	0.986	/
	Level1&2&3		Right Tilt	0	38000	2595	100	Low	-0.11	0.794	19.05	20.00	1.245	0.988	21#
	Level1&2&3			0	38150	2610	1	Low	0.03	0.579	19.18	20.00	1.208	0.699	/
	Level1&2&3		0	38000	2595	50	Low	-0.01	0.592	19.11	20.00	1.227	0.727	/	
Up	Off	QPSK	Left Cheek	0	38150	2610	1	Low	-0.12	0.046	23.62	24.00	1.091	0.050	/
	Off			0	38150	2610	50	Low	0.02	0.034	22.47	23.00	1.130	0.038	/
	Off		Left Tilt	0	38150	2610	1	Low	0.01	0.049	23.62	24.00	1.091	0.054	/
	Off			0	38150	2610	50	Low	0.17	0.037	22.47	23.00	1.130	0.042	/
	Off		Right Cheek	0	38150	2610	1	Low	-0.20	0.047	23.62	24.00	1.091	0.051	/
	Off			0	38150	2610	50	Low	0.12	0.035	22.47	23.00	1.130	0.040	/
	Off		Right Tilt	0	38150	2610	1	Low	0.15	0.041	23.62	24.00	1.091	0.045	/
	Off			0	38150	2610	50	Low	0.10	0.032	22.47	23.00	1.130	0.036	/

Head-CA															
Up	Level 1&2&3	QPSK	Right Cheek	0	PCC38 000 +SCC3 8099	2595+ 2604.9	PCC 1+ SCC 1	High +Low w	0.08	0.578	18.64	20.00	1.368	0.791	/
Body-worn Accessory&Hotspot															
Up	Off	QPSK	Front Side	10	38150	2610	1	Low	-0.19	0.342	23.62	24.00	1.091	0.373	/
	Off			10	38150	2610	50	Low	-0.01	0.262	22.47	23.00	1.130	0.296	/
	Off		Back Side	10	38150	2610	1	Low	0.02	0.373	23.62	24.00	1.091	0.407	/
	Off			10	38150	2610	50	Low	0.11	0.285	22.47	23.00	1.130	0.322	/
	Off		Left Edge	10	38150	2610	1	Low	0.17	0.010	23.62	24.00	1.091	0.011	/
	Off			10	38150	2610	50	Low	0.04	0.008	22.47	23.00	1.130	0.009	/
	Off		Right Edge	10	38150	2610	1	Low	-0.09	0.297	23.62	24.00	1.091	0.324	/
	Off			10	38150	2610	50	Low	-0.15	0.232	22.47	23.00	1.130	0.262	/
	Off		Top Edge	10	38150	2610	1	Low	-0.05	0.420	23.62	24.00	1.091	0.458	22#
	Off			10	38150	2610	50	Low	0.04	0.331	22.47	23.00	1.130	0.374	/
Down	Off	QPSK	Front Side	10	38150	2610	1	Low	0.03	0.164	23.62	24.00	1.091	0.179	/
	Off			10	38150	2610	50	Low	0.15	0.135	22.47	23.00	1.130	0.153	/
	Off		Back Side	10	38150	2610	1	Low	-0.13	0.198	23.62	24.00	1.091	0.216	/
	Off			10	38150	2610	50	Low	-0.10	0.142	22.47	23.00	1.130	0.160	/
	Off		Left Edge	10	38150	2610	1	Low	0.15	0.101	23.62	24.00	1.091	0.110	/
	Off			10	38150	2610	50	Low	-0.09	0.083	22.47	23.00	1.130	0.094	/
	Off		Right Edge	10	38150	2610	1	Low	-0.13	0.046	23.62	24.00	1.091	0.050	/
	Off			10	38150	2610	50	Low	0.08	0.032	22.47	23.00	1.130	0.036	/
	Off		Bottom Edge	10	38150	2610	1	Low	-0.06	0.244	23.62	24.00	1.091	0.266	/
	Off			10	38150	2610	50	Low	0.05	0.189	22.47	23.00	1.130	0.214	/
Body-worn Accessory&Hotspot -CA															
Up	Off	QPSK	Top Edge	10	38150	2610	1	Low	0.09	0.317	22.82	24.00	1.312	0.416	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.															

10.12 LTE Band 41 (20MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head															
Up	Level1&2&3	QPSK	Left Cheek	0	41490	2680	1	Low	0.10	0.296	19.07	20.00	1.239	0.367	/
	Level1&2&3			0	41490	2680	50	Low	0.15	0.263	18.94	20.00	1.276	0.336	/
	Level1&2&3		Left Tilt	0	41490	2680	1	Low	0.00	0.185	19.07	20.00	1.239	0.229	/
	Level1&2&3			0	41490	2680	50	Low	0.09	0.174	18.94	20.00	1.276	0.222	/
	Level1&2&3		Right Cheek	0	41490	2680	1	Low	0.00	0.825	19.07	20.00	1.239	1.022	/
	Level1&2&3			0	39750	2506	1	Low	0.04	0.751	18.95	20.00	1.274	0.956	/
	Level1&2&3			0	40185	2549.5	1	Low	0.08	0.713	18.94	20.00	1.276	0.910	/
	Level1&2&3			0	40620	2593	1	Low	-0.04	0.837	18.96	20.00	1.271	1.063	23#
	Level1&2&3			0	41055	2636.5	1	Mid	0.13	0.806	18.91	20.00	1.285	1.036	/
	Level1&2&3			0	41490	2680	50	Low	-0.19	0.813	18.94	20.00	1.276	1.038	/
	Level1&2&3			0	39750	2506	50	High	-0.01	0.724	18.87	20.00	1.297	0.939	/
	Level1&2&3			0	40185	2549.5	50	High	-0.06	0.706	18.76	20.00	1.330	0.939	/
	Level1&2&3			0	40620	2593	50	Low	0.18	0.805	18.84	20.00	1.306	1.051	/
	Level1&2&3			0	41055	2636.5	50	High	0.04	0.784	18.92	20.00	1.282	1.005	/
	Level1&2&3		0	40185	2549.5	100	Low	0.07	0.802	18.91	20.00	1.285	1.031	/	
	Level1&2&3		Right Tilt	0	41490	2680	1	Low	0.02	0.605	19.07	20.00	1.239	0.749	/
	Level1&2&3			0	41490	2680	50	Low	-0.13	0.579	18.94	20.00	1.276	0.739	/
	Down		Off	QPSK	Left Cheek	0	41055	2636.5	1	Mid	0.01	0.047	23.89	24.50	1.151
Off		0	41055			2636.5	50	High	-0.13	0.040	22.84	23.50	1.164	0.047	/
Off		Left Tilt	0		41055	2636.5	1	Mid	-0.15	0.055	23.89	24.50	1.151	0.063	/
Off			0		41055	2636.5	50	High	-0.11	0.042	22.84	23.50	1.164	0.048	/
Off		Right Cheek	0		41055	2636.5	1	Mid	-0.05	0.054	23.89	24.50	1.151	0.062	/
Off			0		41055	2636.5	50	High	-0.09	0.042	22.84	23.50	1.164	0.048	/
Off		Right Tilt	0		41055	2636.5	1	Mid	-0.07	0.042	23.89	24.50	1.151	0.048	/
Off			0		41055	2636.5	50	High	-0.14	0.035	22.84	23.50	1.164	0.041	/
Body-worn Accessory&Hotspot															
Up	Level4&5&6	QPSK	Front Side	10	41055	2636.5	1	Mid	-0.14	0.263	23.89	24.50	1.151	0.303	/
	Level4&5&6			10	41055	2636.5	50	High	-0.13	0.192	22.84	23.50	1.164	0.224	/
	Level4&5&6		Back Side	10	41055	2636.5	1	Mid	0.11	0.375	23.89	24.50	1.151	0.432	/
	Level4&5&6			10	41055	2636.5	50	High	-0.11	0.294	22.84	23.50	1.164	0.342	/
	Level4&5&6		Left Edge	10	41055	2636.5	1	Mid	0.13	0.012	23.89	24.50	1.151	0.014	/
	Level4&5&6			10	41055	2636.5	50	High	-0.03	0.010	22.84	23.50	1.164	0.012	/
	Level4&5&6		Right Edge	10	41055	2636.5	1	Mid	0.03	0.308	23.89	24.50	1.151	0.354	/
	Level4&5&6			10	41055	2636.5	50	High	0.17	0.235	22.84	23.50	1.164	0.274	/
	Level4&5&6		Top Edge	10	41055	2636.5	1	Mid	-0.11	0.578	23.89	24.50	1.151	0.665	24#
	Level4&5&6			10	41055	2636.5	50	High	-0.15	0.462	22.84	23.50	1.164	0.538	/
Down	Level7&8&9	QPSK	Front Side	10	41055	2636.5	1	Mid	-0.15	0.216	23.89	24.50	1.151	0.249	/
	Level7&8&9			10	41055	2636.5	50	High	0.01	0.179	22.84	23.50	1.164	0.208	/
	Level7&8&9		Back Side	10	41055	2636.5	1	Mid	0.01	0.245	23.89	24.50	1.151	0.282	/

	Level7&8&9		Left Edge	10	41055	2636.5	50	High	0.17	0.192	22.84	23.50	1.164	0.224	/
	Level7&8&9			10	41055	2636.5	1	Mid	-0.06	0.087	23.89	24.50	1.151	0.100	/
	Level7&8&9			10	41055	2636.5	50	High	0.02	0.071	22.84	23.50	1.164	0.083	/
	Level7&8&9			10	41055	2636.5	1	Mid	0.11	0.055	23.89	24.50	1.151	0.063	/
	Level7&8&9		Right Edge	10	41055	2636.5	50	High	0.01	0.045	22.84	23.50	1.164	0.052	/
	Level7&8&9			10	41055	2636.5	1	Mid	-0.14	0.298	23.89	24.50	1.151	0.343	/
	Level7&8&9			10	41055	2636.5	50	High	0.12	0.227	22.84	23.50	1.164	0.264	/
	Level7&8&9			Bottom Edge	10	41055	2636.5	1	Mid	-0.14	0.298	23.89	24.50	1.151	0.343
Level7&8&9	10	41055	2636.5		50	High	0.12	0.227	22.84	23.50	1.164	0.264	/		

Note: Refer to ANNEX C for the detailed test data for each test configuration.

10.13 WIFI 2.4GHZ

Mode	Power Reduction	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	Duty cycle (%)	Duty Factor	1g Scaled SAR (W/kg)	Meas. No.
Head														
802.11 b	Off	Left Cheek	0	11	2462	0.15	0.606	18.18	20.00	1.521	99.00	1.010	0.931	/
	Off		0	1	2412	0.02	0.616	18.05	20.00	1.567	99.00	1.010	0.975	25#
	Off		0	6	2437	-0.18	0.560	18.08	20.00	1.556	99.00	1.010	0.880	/
	Off	Left Tilt	0	11	2462	-0.04	0.575	18.18	20.00	1.521	99.00	1.010	0.883	/
	Off		0	1	2412	0.05	0.582	18.05	20.00	1.567	99.00	1.010	0.921	/
	Off		0	6	2437	-0.18	0.531	18.08	20.00	1.556	99.00	1.010	0.835	/
	Off	Right Cheek	0	11	2462	-0.03	0.164	18.18	20.00	1.521	99.00	1.010	0.252	/
	Off	Right Tilt	0	11	2462	-0.15	0.185	18.18	20.00	1.521	99.00	1.010	0.284	/
802.11 b	Level 2	Left Cheek	0	6	2437	0.01	0.288	14.87	15.00	1.030	99.00	1.010	0.300	/
	Level 2	Left Tilt	0	6	2437	-0.12	0.242	14.87	15.00	1.030	99.00	1.010	0.252	/
	Level 2	Right Cheek	0	6	2437	0.01	0.072	14.87	15.00	1.030	99.00	1.010	0.075	/
	Level 2	Right Tilt	0	6	2437	0.01	0.084	14.87	15.00	1.030	99.00	1.010	0.087	/
Body-worn Accessory&Hotspot														
802.11 b	Off	Front Side	10	11	2462	0.14	0.094	18.18	20.00	1.521	99.00	1.010	0.144	/
	Off	Back Side	10	11	2462	0.09	0.143	18.18	20.00	1.521	99.00	1.010	0.220	/
	Off	Left Edge	10	11	2462	-0.05	0.176	18.18	20.00	1.521	99.00	1.010	0.270	26#
	Off	Top Edge	10	11	2462	-0.02	0.099	18.18	20.00	1.521	99.00	1.010	0.152	/

Note: Refer to ANNEX C for the detailed test data for each test configuration.

10.14 WIFI 5GHz

Fre. Band	Mode	Power Reduction	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	Duty cycle (%)	Duty Factor	1g Scaled SAR (W/kg)	Meas. No.
Head															
5.3G	802.11 a	Off	Left Cheek	0	64	5320	0.17	0.674	18.56	19.00	1.107	98.10	1.019	0.760	27#
		Off	Left Tilt	0	64	5320	-0.17	0.401	18.56	19.00	1.107	98.10	1.019	0.452	/
		Off	Right Cheek	0	64	5320	-0.20	0.134	18.56	19.00	1.107	98.10	1.019	0.151	/
		Off	Right Tilt	0	64	5320	0.20	0.122	18.56	19.00	1.107	98.10	1.019	0.138	/
5.3G	802.11 a	Level 2	Left Cheek	0	64	5320	-0.05	0.237	14.90	15.00	1.023	98.10	1.019	0.247	/
		Level 2	Left Tilt	0	64	5320	0.15	0.132	14.90	15.00	1.023	98.10	1.019	0.138	/
		Level 2	Right Cheek	0	64	5320	-0.14	0.053	14.90	15.00	1.023	98.10	1.019	0.055	/
		Level 2	Right Tilt	0	64	5320	0.13	0.040	14.90	15.00	1.023	98.10	1.019	0.042	/
5.6G	802.11 a	Level 1	Left Cheek	0	100	5500	0.09	0.710	16.38	16.50	1.028	98.10	1.019	0.744	28#
		Level 1	Left Tilt	0	100	5500	0.12	0.635	16.38	16.50	1.028	98.10	1.019	0.665	/
		Level 1	Right Cheek	0	100	5500	0.13	0.162	16.38	16.50	1.028	98.10	1.019	0.170	/
		Level 1	Right Tilt	0	100	5500	0.13	0.138	16.38	16.50	1.028	98.10	1.019	0.145	/
5.6G	802.11 a	Level 2	Left Cheek	0	100	5500	-0.09	0.452	14.40	14.50	1.023	98.10	1.019	0.471	/
		Level 2	Left Tilt	0	100	5500	0.12	0.384	14.40	14.50	1.023	98.10	1.019	0.401	/
		Level 2	Right Cheek	0	100	5500	-0.17	0.112	14.40	14.50	1.023	98.10	1.019	0.117	/
		Level 2	Right Tilt	0	100	5500	-0.11	0.076	14.40	14.50	1.023	98.10	1.019	0.079	/
5.8G	802.11 ac(VH T80)	Off	Left Cheek	0	155	5775	0.15	0.669	13.98	14.00	1.005	93.30	1.072	0.720	29#
		Off	Left Tilt	0	155	5775	-0.10	0.535	13.98	14.00	1.005	93.30	1.072	0.576	/
		Off	Right Cheek	0	155	5775	-0.07	0.140	13.98	14.00	1.005	93.30	1.072	0.151	/
		Off	Right Tilt	0	155	5775	0.00	0.127	13.98	14.00	1.005	93.30	1.072	0.137	/
5.8G	802.11 ac(VH T80)	Level 2	Left Cheek	0	155	5775	-0.02	0.436	13.98	12.00	0.634	93.30	1.072	0.296	/
		Level 2	Left Tilt	0	155	5775	-0.17	0.327	13.98	12.00	0.634	93.30	1.072	0.222	/
		Level 2	Right Cheek	0	155	5775	0.10	0.088	13.98	12.00	0.634	93.30	1.072	0.060	/
		Level 2	Right Tilt	0	155	5775	-0.04	0.072	13.98	12.00	0.634	93.30	1.072	0.049	/
Body-worn Accessory															
5.3G	802.11 a	Off	Front Side	10	64	5320	0.01	0.108	18.56	19.00	1.107	98.10	1.019	0.122	/
		Off	Back Side	10	64	5320	-0.14	0.140	18.56	19.00	1.107	98.10	1.019	0.158	30#
5.6G	802.11 a	Off	Front Side	10	100	5500	0.03	0.226	18.62	19.00	1.091	98.10	1.019	0.251	/
		Off	Back Side	10	100	5500	-0.12	0.313	18.62	19.00	1.091	98.10	1.019	0.348	31#
5.8G	802.11 ac(VH T80)	Off	Front Side	10	155	5775	-0.07	0.100	13.98	14.00	1.005	93.30	1.072	0.108	/
		Off	Back Side	10	155	5775	-0.04	0.121	13.98	14.00	1.005	93.30	1.072	0.130	32#
Hotspot															
5.2G	802.11 a	Off	Front Side	10	36	5180	-0.13	0.172	18.20	19.00	1.202	98.10	1.019	0.211	/
		Off	Back Side	10	36	5180	-0.07	0.201	18.20	19.00	1.202	98.10	1.019	0.246	/
		Off	Left Edge	10	36	5180	0.12	0.331	18.20	19.00	1.202	98.10	1.019	0.406	33#
		Off	Top Edge	10	36	5180	-0.16	0.103	18.20	19.00	1.202	98.10	1.019	0.126	/
5.8G	802.11 ac(VH T80)	Off	Front Side	10	155	5775	-0.07	0.100	13.98	14.00	1.005	93.30	1.072	0.108	/
		Off	Back Side	10	155	5775	-0.04	0.121	13.98	14.00	1.005	93.30	1.072	0.130	/
		Off	Left Edge	10	155	5775	-0.05	0.210	13.98	14.00	1.005	93.30	1.072	0.226	34#

Fre. Band	Mode	Power Reduction	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	Duty cycle (%)	Duty Factor	10g Scaled SAR (W/kg)	Meas. No.
		Off	Top Edge	10	155	5775	-0.06	0.087	13.98	14.00	1.005	93.30	1.072	0.093	/
Specific															
5.3G	802.11 a	Off	Front Side	0	64	5320	-0.05	0.360	18.56	19.00	1.107	98.10	1.019	0.406	/
		Off	Back Side	0	64	5320	0.11	0.208	18.56	19.00	1.107	98.10	1.019	0.235	/
		Off	Left Edge	0	64	5320	0.02	0.584	18.56	19.00	1.107	98.10	1.019	0.659	35#
		Off	Top Edge	0	64	5320	-0.12	0.112	18.56	19.00	1.107	98.10	1.019	0.126	/
5.6G	802.11 a	Off	Front Side	0	100	5500	-0.16	0.325	17.62	19.00	1.374	98.10	1.019	0.455	/
		Off	Back Side	0	100	5500	0.04	0.214	17.62	19.00	1.374	98.10	1.019	0.300	/
		Off	Left Edge	0	100	5500	0.12	0.606	17.62	19.00	1.374	98.10	1.019	0.849	36#
		Off	Top Edge	0	100	5500	-0.06	0.104	17.62	19.00	1.374	98.10	1.019	0.146	/

Note: Refer to ANNEX C for the detailed test data for each test configuration.

10.15 Bluetooth

Mode	Power Reduction	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	Duty cycle(%)	Duty Factor	1g Scaled SAR (W/kg)	Meas. No.
Head														
DH5	Off	Left Cheek	0	78	2480	-0.02	0.132	11.68	12.50	1.208	76.80	1.302	0.208	37#
	Off	Left Tilt	0	78	2480	-0.10	0.115	11.68	12.50	1.208	76.80	1.302	0.181	/
	Off	Right Cheek	0	78	2480	-0.19	0.033	11.68	12.50	1.208	76.80	1.302	0.052	/
	Off	Right Tilt	0	78	2480	-0.17	0.035	11.68	12.50	1.208	76.80	1.302	0.055	/
Body-worn Accessory														
DH5	Off	Front Side	10	78	2480	0.14	0.020	11.68	12.50	1.208	76.80	1.302	0.031	/
	Off	Back Side	10	78	2480	0.07	0.031	11.68	12.50	1.208	76.80	1.302	0.048	/
	Off	Left Edge	10	78	2480	0.00	0.043	11.68	12.50	1.208	76.80	1.302	0.067	38#
	Off	Top Edge	10	78	2480	-0.08	0.026	11.68	12.50	1.208	76.80	1.302	0.040	/

Note: Refer to ANNEX C for the detailed test data for each test configuration.

11 SAR Measurement Variability

According to KDB 865664 D01, SAR measurement variability was assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. Alternatively, if the highest measured SAR for both head and body tissue-equivalent media are ≤ 1.45 W/kg and the ratio of these highest SAR values, i.e., largest divided by smallest value, is ≤ 1.10 , the highest SAR configuration for either head or body tissue-equivalent medium may be used to perform the repeated measurement. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR repeated measurement procedure:

1. When the highest measured SAR is < 0.80 W/kg, repeated measurement is not required.
2. When the highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
3. If the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 , or when the original or repeated measurement is ≥ 1.45 W/kg, perform a second repeated measurement.
4. If the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 , and the original, first or second repeated measurement is ≥ 1.5 W/kg, perform a third repeated measurement.

Frequency Band (MHz)	Wireless Band	RF Exposure Conditions	Test Position	Highest Measured SAR (W/kg)	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	Largest to Smallest SAR Ratio
850	GSM	Head	Right Cheek	1.120	Yes	1.040	1.08
1900	GSM	Head	Right Cheek	1.030	Yes	0.948	1.09
1900	WCDMA band 2	Head	Right Cheek	0.843	Yes	0.791	1.09
1700	WCDMA band 4	Head	Right Cheek	0.858	Yes	0.814	1.05
1700	LTE band 4	Head	Right Cheek	0.822	Yes	0.775	1.06
2600	LTE band 38	Head	Right Cheek	0.803	Yes	0.742	1.08
2500	LTE band 41	Head	Right Cheek	0.837	Yes	0.806	1.04

Note: The ratio of largest to smallest SAR for the original and first repeated measurements is < 1.20 , the second repeated measurement. is not required.

Note: For product specific 10g SAR, the highest measured 10g SAR is $0.61 < 2.0$ W/kg, repeated measurement is not required.

12 SIMULTANEOUS TRANSMISSION

Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna. When the sum of SAR 1g of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit (SAR 1g 1.6 W/kg), the simultaneous transmission SAR is not required. When the sum of SAR 1g is greater than the SAR limit (SAR 1g 1.6 W/kg), SAR test exclusion is determined by the SAR to Peak Location Ratio (SPLSR).

12.1 Simultaneous Transmission Mode Consider

No.	Simultaneous Tx Combination	Head	Body-worn	Hotspot
1	GSM + WiFi 2.4G	Yes	Yes	Yes
2	UMTS + WiFi 2.4G	Yes	Yes	Yes
3	LTE + WiFi 2.4G	Yes	Yes	Yes
4	GSM + 5G WIFI + Bluetooth	Yes	Yes	Yes
5	UMTS + 5G WIFI + Bluetooth	Yes	Yes	Yes
6	LTE + 5G WIFI + Bluetooth	Yes	Yes	Yes

Note:

1. 2G&3G&4G share the same antenna and can't transmit simultaneously.
2. 2.4G WLAN can't transmit simultaneously with Bluetooth or 5G WLAN.
3. Two WWAN antennas can switch automatically, but up and down antenna can't transmit simultaneously.
4. The maximum SAR summation is calculated based on the same configuration and test position.
5. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
6. This device 2.4GHz WLAN/5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WiFi Direct (GC/GO), and 5.3GHz WLAN/5.5GHz WLAN supports WiFi Direct (GC only)

12.2 Sum SAR of Simultaneous Transmission

12.2.1 Head Simultaneous Transmission SAR Evaluation for WWAN Up Antenna with WLAN 2.4G or WLAN 5G

Band	Power Reduction	Position	Stand alone SAR				SUM SAR	
			1	2	3	4	Sum SAR (1+2)	Sum SAR (1+3+4)
			WWAN	2.4GWIFI (Level2)	5GWIFI (Level2)	Bluetooth		
GSM 850	Level 1&2&3	Left Cheek	0.762	0.300	0.471	0.208	1.062	1.441
	Level 1&2&3	Left Tilt	0.217	0.252	0.401	0.181	0.469	0.799
	Level 1&2&3	Right Cheek	1.192	0.075	0.117	0.052	1.267	1.361
	Level 1&2&3	Right Tilt	0.283	0.087	0.079	0.055	0.370	0.417
GSM1900	Level 1&2&3	Left Cheek	0.533	0.300	0.471	0.208	0.833	1.212
	Level 1&2&3	Left Tilt	0.350	0.252	0.401	0.181	0.602	0.932
	Level 1&2&3	Right Cheek	1.156	0.075	0.117	0.052	1.231	1.325
	Level 1&2&3	Right Tilt	0.770	0.087	0.079	0.055	0.857	0.904
WCDMA B2	Level 1&2&3	Left Cheek	0.356	0.300	0.471	0.208	0.656	1.035
	Level 1&2&3	Left Tilt	0.284	0.252	0.401	0.181	0.536	0.866
	Level 1&2&3	Right Cheek	1.047	0.075	0.117	0.052	1.122	1.216
	Level 1&2&3	Right Tilt	0.629	0.087	0.079	0.055	0.716	0.763
WCDMA B4	Level 1&2&3	Left Cheek	0.346	0.300	0.471	0.208	0.646	1.025
	Level 1&2&3	Left Tilt	0.264	0.252	0.401	0.181	0.516	0.846
	Level 1&2&3	Right Cheek	1.032	0.075	0.117	0.052	1.107	1.201
	Level 1&2&3	Right Tilt	0.670	0.087	0.079	0.055	0.757	0.804
WCDMA B5	Level 1&2&3	Left Cheek	0.711	0.300	0.471	0.208	1.011	1.390
	Level 1&2&3	Left Tilt	0.156	0.252	0.401	0.181	0.408	0.738
	Level 1&2&3	Right Cheek	0.971	0.075	0.117	0.052	1.046	1.140
	Level 1&2&3	Right Tilt	0.213	0.087	0.079	0.055	0.300	0.347
LTE B2	Level 1&2&3	Left Cheek	0.301	0.300	0.471	0.208	0.601	0.980
	Level 1&2&3	Left Tilt	0.247	0.252	0.401	0.181	0.499	0.829
	Level 1&2&3	Right Cheek	0.889	0.075	0.117	0.052	0.964	1.058
	Level 1&2&3	Right Tilt	0.485	0.087	0.079	0.055	0.572	0.619
LTE B4	Level 1&2&3	Left Cheek	0.350	0.300	0.471	0.208	0.650	1.029
	Level 1&2&3	Left Tilt	0.286	0.252	0.401	0.181	0.538	0.868
	Level 1&2&3	Right Cheek	1.016	0.075	0.117	0.052	1.091	1.185
	Level 1&2&3	Right Tilt	0.657	0.087	0.079	0.055	0.744	0.791
LTE B5	Level 1&2&3	Left Cheek	0.477	0.300	0.471	0.208	0.777	1.156
	Level 1&2&3	Left Tilt	0.108	0.252	0.401	0.181	0.360	0.690
	Level 1&2&3	Right Cheek	0.683	0.075	0.117	0.052	0.758	0.852
	Level 1&2&3	Right Tilt	0.144	0.087	0.079	0.055	0.231	0.278
LTE B7	Level 1&2&3	Left Cheek	0.306	0.300	0.471	0.208	0.606	0.985
	Level 1&2&3	Left Tilt	0.223	0.252	0.401	0.181	0.475	0.805
	Level 1&2&3	Right Cheek	0.910	0.075	0.117	0.052	0.985	1.079

	Level 1&2&3	Right Tilt	0.701	0.087	0.079	0.055	0.788	0.835
LTE B26	Level 1&2&3	Left Cheek	0.611	0.300	0.471	0.208	0.911	1.290
	Level 1&2&3	Left Tilt	0.155	0.252	0.401	0.181	0.407	0.737
	Level 1&2&3	Right Cheek	0.842	0.075	0.117	0.052	0.917	1.011
	Level 1&2&3	Right Tilt	0.218	0.087	0.079	0.055	0.305	0.352
LTE B38	Level 1&2&3	Left Cheek	0.347	0.300	0.471	0.208	0.647	1.026
	Level 1&2&3	Left Tilt	0.231	0.252	0.401	0.181	0.483	0.813
	Level 1&2&3	Right Cheek	0.988	0.075	0.117	0.052	1.063	1.157
	Level 1&2&3	Right Tilt	0.727	0.087	0.079	0.055	0.814	0.861
LTE B41	Level 1&2&3	Left Cheek	0.367	0.300	0.471	0.208	0.667	1.046
	Level 1&2&3	Left Tilt	0.229	0.252	0.401	0.181	0.481	0.811
	Level 1&2&3	Right Cheek	1.063	0.075	0.117	0.052	1.138	1.232
	Level 1&2&3	Right Tilt	0.749	0.087	0.079	0.055	0.836	0.883

Note:

1: The simultaneous transmission combinations of the three antennas contain combinations of two antennas, so only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 1.441 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.2 Body-worn Simultaneous Transmission SAR Evaluation for WWAN Up Antenna with WLAN 2.4G or WLAN 5G

Band	Power Reduction	Position	Stand alone SAR				SUM SAR	
			1	2	3	4	Sum SAR (1+2)	Sum SAR (1+3+4)
			WWAN	2.4GWIFI	5GWIFI	Bluetooth		
GSM 850	Off	Front Side 10mm	0.443	0.149	0.251	0.031	0.592	0.725
	Off	Back Side 10mm	0.573	0.226	0.348	0.048	0.799	0.969
GSM1900	Off	Front Side 10mm	0.247	0.149	0.251	0.031	0.396	0.529
	Off	Back Side 10mm	0.335	0.226	0.348	0.048	0.561	0.731
WCDMA B2	Off	Front Side 10mm	0.558	0.149	0.251	0.031	0.707	0.840
	Off	Back Side 10mm	0.761	0.226	0.348	0.048	0.987	1.157
WCDMA B4	Off	Front Side 10mm	0.306	0.149	0.251	0.031	0.455	0.588
	Off	Back Side 10mm	0.463	0.226	0.348	0.048	0.689	0.859
WCDMA B5	Off	Front Side 10mm	0.452	0.149	0.251	0.031	0.601	0.734
	Off	Back Side 10mm	0.682	0.226	0.348	0.048	0.908	1.078
LTE B2	Off	Front Side 10mm	0.342	0.149	0.251	0.031	0.491	0.624
	Off	Back Side 10mm	0.468	0.226	0.348	0.048	0.694	0.864
LTE B4	Off	Front Side 10mm	0.410	0.149	0.251	0.031	0.559	0.692
	Off	Back Side 10mm	0.520	0.226	0.348	0.048	0.746	0.916
LTE B5	Off	Front Side 10mm	0.271	0.149	0.251	0.031	0.420	0.553
	Off	Back Side 10mm	0.516	0.226	0.348	0.048	0.742	0.912
LTE B7	Off	Front Side 10mm	0.761	0.149	0.251	0.031	0.910	1.043

	Off	Back Side 10mm	0.874	0.226	0.348	0.048	1.100	1.270
LTE B26	Off	Front Side 10mm	0.384	0.149	0.251	0.031	0.533	0.666
	Off	Back Side 10mm	0.520	0.226	0.348	0.048	0.746	0.916
LTE B38	Off	Front Side 10mm	0.373	0.149	0.251	0.031	0.522	0.655
	Off	Back Side 10mm	0.407	0.226	0.348	0.048	0.633	0.803
LTE B41	Off	Front Side 10mm	0.303	0.149	0.251	0.031	0.452	0.585
	Off	Back Side 10mm	0.432	0.226	0.348	0.048	0.658	0.828

Note:

1: The simultaneous transmission combinations of the three antennas contain combinations of two antennas, so only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 1.27W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.3 Hotspot Simultaneous Transmission SAR Evaluation for WWAN Up Antenna with WLAN 2.4G or WLAN 5G

Band	Power Reduction	Position	Stand alone SAR				SUM SAR	
			1	2	3	4	Sum SAR (1+2)	Sum SAR (1+3+4)
			WWAN	2.4GWIFI	5GWIFI	Bluetooth		
GSM 850	Off	Front Side 10mm	0.443	0.149	0.211	0.031	0.592	0.685
	Off	Back Side 10mm	0.573	0.226	0.246	0.048	0.799	0.867
	Off	Left Edge 10mm	0.004	0.278	0.406	0.067	0.282	0.477
	Off	Right Edge 10mm	0.549	0.000	0.000	0.000	0.549	0.549
	Off	Top Edge 10mm	0.024	0.158	0.126	0.040	0.182	0.190
GSM1900	Off	Front Side 10mm	0.247	0.149	0.211	0.031	0.396	0.489
	Off	Back Side 10mm	0.335	0.226	0.246	0.048	0.561	0.629
	Off	Left Edge 10mm	0.011	0.278	0.406	0.067	0.289	0.484
	Off	Right Edge 10mm	0.264	0.000	0.000	0.000	0.264	0.264
	Off	Top Edge 10mm	0.286	0.158	0.126	0.040	0.444	0.452
WCDMA B2	Off	Front Side 10mm	0.558	0.149	0.211	0.031	0.707	0.800
	Off	Back Side 10mm	0.761	0.226	0.246	0.048	0.987	1.055
	Off	Left Edge 10mm	0.056	0.278	0.406	0.067	0.334	0.529
	Off	Right Edge 10mm	0.449	0.000	0.000	0.000	0.449	0.449
	Off	Top Edge 10mm	0.441	0.158	0.126	0.040	0.599	0.607
WCDMA B4	Off	Front Side 10mm	0.306	0.149	0.211	0.031	0.455	0.548
	Off	Back Side 10mm	0.463	0.226	0.246	0.048	0.689	0.757
	Off	Left Edge 10mm	0.059	0.278	0.406	0.067	0.337	0.532
	Off	Right Edge 10mm	0.382	0.000	0.000	0.000	0.382	0.382
	Off	Top Edge 10mm	0.344	0.158	0.126	0.040	0.502	0.510
WCDMA B5	Off	Front Side 10mm	0.452	0.149	0.211	0.031	0.601	0.694
	Off	Back Side 10mm	0.682	0.226	0.246	0.048	0.908	0.976
	Off	Left Edge 10mm	0.008	0.278	0.406	0.067	0.286	0.481

	Off	Right Edge 10mm	0.539	0.000	0.000	0.000	0.539	0.539
	Off	Top Edge 10mm	0.038	0.158	0.126	0.040	0.196	0.204
LTE B2	Off	Front Side 10mm	0.342	0.149	0.211	0.031	0.491	0.584
	Off	Back Side 10mm	0.468	0.226	0.246	0.048	0.694	0.762
	Off	Left Edge 10mm	0.041	0.278	0.406	0.067	0.319	0.514
	Off	Right Edge 10mm	0.399	0.000	0.000	0.000	0.399	0.399
	Off	Top Edge 10mm	0.341	0.158	0.126	0.040	0.499	0.507
LTE B4	Off	Front Side 10mm	0.410	0.149	0.211	0.031	0.559	0.652
	Off	Back Side 10mm	0.520	0.226	0.246	0.048	0.746	0.814
	Off	Left Edge 10mm	0.058	0.278	0.406	0.067	0.336	0.531
	Off	Right Edge 10mm	0.426	0.000	0.000	0.000	0.426	0.426
	Off	Top Edge 10mm	0.284	0.158	0.126	0.040	0.442	0.450
LTE B5	Off	Front Side 10mm	0.271	0.149	0.211	0.031	0.420	0.513
	Off	Back Side 10mm	0.516	0.226	0.246	0.048	0.742	0.810
	Off	Left Edge 10mm	0.009	0.278	0.406	0.067	0.287	0.482
	Off	Right Edge 10mm	0.546	0.000	0.000	0.000	0.546	0.546
	Off	Top Edge 10mm	0.024	0.158	0.126	0.040	0.182	0.190
LTE B7	Off	Front Side 10mm	0.761	0.149	0.211	0.031	0.910	1.003
	Off	Back Side 10mm	0.874	0.226	0.246	0.048	1.100	1.168
	Off	Left Edge 10mm	0.016	0.278	0.406	0.067	0.294	0.489
	Off	Right Edge 10mm	0.606	0.000	0.000	0.000	0.606	0.606
	Off	Top Edge 10mm	0.414	0.158	0.126	0.040	0.572	0.580
LTE B26	Off	Front Side 10mm	0.384	0.149	0.211	0.031	0.533	0.626
	Off	Back Side 10mm	0.520	0.226	0.246	0.048	0.746	0.814
	Off	Left Edge 10mm	0.005	0.278	0.406	0.067	0.283	0.478
	Off	Right Edge 10mm	0.378	0.000	0.000	0.000	0.378	0.378
	Off	Top Edge 10mm	0.022	0.158	0.126	0.040	0.180	0.188
LTE B38	Off	Front Side 10mm	0.373	0.149	0.211	0.031	0.522	0.615
	Off	Back Side 10mm	0.407	0.226	0.246	0.048	0.633	0.701
	Off	Left Edge 10mm	0.011	0.278	0.406	0.067	0.289	0.484
	Off	Right Edge 10mm	0.324	0.000	0.000	0.000	0.324	0.324
	Off	Top Edge 10mm	0.458	0.158	0.126	0.040	0.616	0.624
LTE B41	Off	Front Side 10mm	0.303	0.149	0.211	0.031	0.452	0.545
	Off	Back Side 10mm	0.432	0.226	0.246	0.048	0.658	0.726
	Off	Left Edge 10mm	0.014	0.278	0.406	0.067	0.292	0.487
	Off	Right Edge 10mm	0.354	0.000	0.000	0.000	0.354	0.354
	Off	Top Edge 10mm	0.665	0.158	0.126	0.040	0.823	0.831

Note:

1: The simultaneous transmission combinations of the three antennas contain combinations of two antennas, so only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 1.168 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.4 Head Simultaneous Transmission SAR Evaluation for WWAN Down Antenna with WLAN 2.4G or WLAN 5G

Band	Power Reduction	Position	Stand alone SAR				SUM SAR	
			1	2	3	4	Sum SAR (1+2)	Sum SAR (1+3+4)
			WWAN	2.4GWIFI (Level2)	5GWIFI (Level2)	Bluetooth		
GSM 850	Off	Left Cheek	0.296	0.300	0.471	0.208	0.596	0.975
	Off	Left Tilt	0.146	0.252	0.401	0.181	0.398	0.728
	Off	Right Cheek	0.266	0.075	0.117	0.052	0.341	0.435
	Off	Right Tilt	0.180	0.087	0.079	0.055	0.267	0.314
GSM1900	Off	Left Cheek	0.059	0.300	0.471	0.208	0.359	0.738
	Off	Left Tilt	0.036	0.252	0.401	0.181	0.288	0.618
	Off	Right Cheek	0.077	0.075	0.117	0.052	0.152	0.246
	Off	Right Tilt	0.054	0.087	0.079	0.055	0.141	0.188
WCDMA B2	Off	Left Cheek	0.148	0.300	0.471	0.208	0.448	0.827
	Off	Left Tilt	0.122	0.252	0.401	0.181	0.374	0.704
	Off	Right Cheek	0.193	0.075	0.117	0.052	0.268	0.362
	Off	Right Tilt	0.143	0.087	0.079	0.055	0.230	0.277
WCDMA B4	Off	Left Cheek	0.078	0.300	0.471	0.208	0.378	0.757
	Off	Left Tilt	0.059	0.252	0.401	0.181	0.311	0.641
	Off	Right Cheek	0.100	0.075	0.117	0.052	0.175	0.269
	Off	Right Tilt	0.061	0.087	0.079	0.055	0.148	0.195
WCDMA B5	Off	Left Cheek	0.240	0.300	0.471	0.208	0.540	0.919
	Off	Left Tilt	0.095	0.252	0.401	0.181	0.347	0.677
	Off	Right Cheek	0.295	0.075	0.117	0.052	0.370	0.464
	Off	Right Tilt	0.104	0.087	0.079	0.055	0.191	0.238
LTE B2	Off	Left Cheek	0.093	0.300	0.471	0.208	0.393	0.772
	Off	Left Tilt	0.074	0.252	0.401	0.181	0.326	0.656
	Off	Right Cheek	0.115	0.075	0.117	0.052	0.190	0.284
	Off	Right Tilt	0.081	0.087	0.079	0.055	0.168	0.215
LTE B4	Off	Left Cheek	0.068	0.300	0.471	0.208	0.368	0.747
	Off	Left Tilt	0.054	0.252	0.401	0.181	0.306	0.636
	Off	Right Cheek	0.104	0.075	0.117	0.052	0.179	0.273
	Off	Right Tilt	0.074	0.087	0.079	0.055	0.161	0.208
LTE B5	Off	Left Cheek	0.223	0.300	0.471	0.208	0.523	0.902
	Off	Left Tilt	0.104	0.252	0.401	0.181	0.356	0.686
	Off	Right Cheek	0.177	0.075	0.117	0.052	0.252	0.346
	Off	Right Tilt	0.100	0.087	0.079	0.055	0.187	0.234
LTE B7	Off	Left Cheek	0.129	0.300	0.471	0.208	0.429	0.808
	Off	Left Tilt	0.100	0.252	0.401	0.181	0.352	0.682
	Off	Right Cheek	0.147	0.075	0.117	0.052	0.222	0.316
	Off	Right Tilt	0.088	0.087	0.079	0.055	0.175	0.222

LTE B26	Off	Left Cheek	0.185	0.300	0.471	0.208	0.485	0.864
	Off	Left Tilt	0.082	0.252	0.401	0.181	0.334	0.664
	Off	Right Cheek	0.147	0.075	0.117	0.052	0.222	0.316
	Off	Right Tilt	0.079	0.087	0.079	0.055	0.166	0.213
LTE B38	Off	Left Cheek	0.050	0.300	0.471	0.208	0.350	0.729
	Off	Left Tilt	0.054	0.252	0.401	0.181	0.306	0.636
	Off	Right Cheek	0.051	0.075	0.117	0.052	0.126	0.220
	Off	Right Tilt	0.045	0.087	0.079	0.055	0.132	0.179
LTE B41	Off	Left Cheek	0.054	0.300	0.471	0.208	0.354	0.733
	Off	Left Tilt	0.063	0.252	0.401	0.181	0.315	0.645
	Off	Right Cheek	0.062	0.075	0.117	0.052	0.137	0.231
	Off	Right Tilt	0.048	0.087	0.079	0.055	0.135	0.182

Note:

1: The simultaneous transmission combinations of the three antennas contain combinations of two antennas, so only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 0.975 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.5 Body-worn Simultaneous Transmission SAR Evaluation for WWAN Down Antenna with WLAN 2.4G or WLAN 5G

Band	Power Reduction	Position	Stand alone SAR				SUM SAR	
			1	2	3	4	Sum SAR (1+2)	Sum SAR (1+3+4)
			WWAN	2.4GWIFI	5GWIFI	Bluetooth		
GSM 850	Off	Front Side 10mm	0.192	0.149	0.251	0.031	0.341	0.474
	Off	Back Side 10mm	0.303	0.226	0.348	0.048	0.529	0.699
GSM1900	Off	Front Side 10mm	0.167	0.149	0.251	0.031	0.316	0.449
	Off	Back Side 10mm	0.212	0.226	0.348	0.048	0.438	0.608
WCDMA B2	Off	Front Side 10mm	0.433	0.149	0.251	0.031	0.582	0.715
	Off	Back Side 10mm	0.499	0.226	0.348	0.048	0.725	0.895
WCDMA B4	Off	Front Side 10mm	0.393	0.149	0.251	0.031	0.542	0.675
	Off	Back Side 10mm	0.478	0.226	0.348	0.048	0.704	0.874
WCDMA B5	Off	Front Side 10mm	0.328	0.149	0.251	0.031	0.477	0.610
	Off	Back Side 10mm	0.451	0.226	0.348	0.048	0.677	0.847
LTE B2	Off	Front Side 10mm	0.270	0.149	0.251	0.031	0.419	0.552
	Off	Back Side 10mm	0.405	0.226	0.348	0.048	0.631	0.801
LTE B4	Off	Front Side 10mm	0.288	0.149	0.251	0.031	0.437	0.570
	Off	Back Side 10mm	0.357	0.226	0.348	0.048	0.583	0.753
LTE B5	Off	Front Side 10mm	0.202	0.149	0.251	0.031	0.351	0.484
	Off	Back Side 10mm	0.307	0.226	0.348	0.048	0.533	0.703
LTE B7	Off	Front Side 10mm	0.319	0.149	0.251	0.031	0.468	0.601
	Off	Back Side 10mm	0.388	0.226	0.348	0.048	0.614	0.784

LTE B26	Off	Front Side 10mm	0.257	0.149	0.251	0.031	0.406	0.539
	Off	Back Side 10mm	0.362	0.226	0.348	0.048	0.588	0.758
LTE B38	Off	Front Side 10mm	0.179	0.149	0.251	0.031	0.328	0.461
	Off	Back Side 10mm	0.216	0.226	0.348	0.048	0.442	0.612
LTE B41	Off	Front Side 10mm	0.249	0.149	0.251	0.031	0.398	0.531
	Off	Back Side 10mm	0.282	0.226	0.348	0.048	0.508	0.678

Note:

1: The simultaneous transmission combinations of the three antennas contain combinations of two antennas, so only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 0.895W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.6 Hotspot Simultaneous Transmission SAR Evaluation for WWAN Down Antenna with WLAN 2.4G or WLAN 5G

Band	Power Reduction	Position	Stand alone SAR				SUM SAR	
			1	2	3	4	Sum SAR (1+2)	Sum SAR (1+3+4)
			WWAN	2.4GWIFI	5GWIFI	Bluetooth		
GSM 850	Off	Front Side 10mm	0.192	0.149	0.211	0.031	0.341	0.434
	Off	Back Side 10mm	0.303	0.226	0.246	0.048	0.529	0.597
	Off	Left Edge 10mm	0.019	0.278	0.406	0.067	0.297	0.492
	Off	Right Edge 10mm	0.152	0.000	0.000	0.000	0.152	0.152
	Off	Bottom Edge 10mm	0.240	0.158	0.126	0.040	0.398	0.406
GSM1900	Off	Front Side 10mm	0.167	0.149	0.211	0.031	0.316	0.409
	Off	Back Side 10mm	0.212	0.226	0.246	0.048	0.438	0.506
	Off	Left Edge 10mm	0.031	0.278	0.406	0.067	0.309	0.504
	Off	Right Edge 10mm	0.105	0.000	0.000	0.000	0.105	0.105
	Off	Bottom Edge 10mm	0.318	0.158	0.126	0.040	0.476	0.484
WCDMA B2	Off	Front Side 10mm	0.433	0.149	0.211	0.031	0.582	0.675
	Off	Back Side 10mm	0.499	0.226	0.246	0.048	0.725	0.793
	Off	Left Edge 10mm	0.334	0.278	0.406	0.067	0.612	0.807
	Off	Right Edge 10mm	0.080	0.000	0.000	0.000	0.080	0.080
	Off	Bottom Edge 10mm	0.765	0.158	0.126	0.040	0.923	0.931
WCDMA B4	Off	Front Side 10mm	0.393	0.149	0.211	0.031	0.542	0.635
	Off	Back Side 10mm	0.478	0.226	0.246	0.048	0.704	0.772
	Off	Left Edge 10mm	0.304	0.278	0.406	0.067	0.582	0.777
	Off	Right Edge 10mm	0.084	0.000	0.000	0.000	0.084	0.084
	Off	Bottom Edge 10mm	0.715	0.158	0.126	0.040	0.873	0.881
WCDMA B5	Off	Front Side 10mm	0.328	0.149	0.211	0.031	0.477	0.570
	Off	Back Side 10mm	0.451	0.226	0.246	0.048	0.677	0.745
	Off	Left Edge 10mm	0.018	0.278	0.406	0.067	0.296	0.491
	Off	Right Edge 10mm	0.243	0.000	0.000	0.000	0.243	0.243

	Off	Bottom Edge 10mm	0.349	0.158	0.126	0.040	0.507	0.515
LTE B2	Off	Front Side 10mm	0.270	0.149	0.211	0.031	0.419	0.512
	Off	Back Side 10mm	0.405	0.226	0.246	0.048	0.631	0.699
	Off	Left Edge 10mm	0.176	0.278	0.406	0.067	0.454	0.649
	Off	Right Edge 10mm	0.070	0.000	0.000	0.000	0.070	0.070
	Off	Bottom Edge 10mm	0.646	0.158	0.126	0.040	0.804	0.812
LTE B4	Off	Front Side 10mm	0.288	0.149	0.211	0.031	0.437	0.530
	Off	Back Side 10mm	0.357	0.226	0.246	0.048	0.583	0.651
	Off	Left Edge 10mm	0.166	0.278	0.406	0.067	0.444	0.639
	Off	Right Edge 10mm	0.083	0.000	0.000	0.000	0.083	0.083
	Off	Bottom Edge 10mm	0.654	0.158	0.126	0.040	0.812	0.820
LTE B5	Off	Front Side 10mm	0.202	0.149	0.211	0.031	0.351	0.444
	Off	Back Side 10mm	0.307	0.226	0.246	0.048	0.533	0.601
	Off	Left Edge 10mm	0.020	0.278	0.406	0.067	0.298	0.493
	Off	Right Edge 10mm	0.145	0.000	0.000	0.000	0.145	0.145
	Off	Bottom Edge 10mm	0.230	0.158	0.126	0.040	0.388	0.396
LTE B7	Off	Front Side 10mm	0.319	0.149	0.211	0.031	0.468	0.561
	Off	Back Side 10mm	0.388	0.226	0.246	0.048	0.614	0.682
	Off	Left Edge 10mm	0.162	0.278	0.406	0.067	0.440	0.635
	Off	Right Edge 10mm	0.011	0.000	0.000	0.000	0.011	0.011
	Off	Bottom Edge 10mm	0.505	0.158	0.126	0.040	0.663	0.671
LTE B26	Off	Front Side 10mm	0.257	0.149	0.211	0.031	0.406	0.499
	Off	Back Side 10mm	0.362	0.226	0.246	0.048	0.588	0.656
	Off	Left Edge 10mm	0.012	0.278	0.406	0.067	0.290	0.485
	Off	Right Edge 10mm	0.140	0.000	0.000	0.000	0.140	0.140
	Off	Bottom Edge 10mm	0.220	0.158	0.126	0.040	0.378	0.386
LTE B38	Off	Front Side 10mm	0.179	0.149	0.211	0.031	0.328	0.421
	Off	Back Side 10mm	0.216	0.226	0.246	0.048	0.442	0.510
	Off	Left Edge 10mm	0.110	0.278	0.406	0.067	0.388	0.583
	Off	Right Edge 10mm	0.050	0.000	0.000	0.000	0.050	0.050
	Off	Bottom Edge 10mm	0.266	0.158	0.126	0.040	0.424	0.432
LTE B41	Off	Front Side 10mm	0.249	0.149	0.211	0.031	0.398	0.491
	Off	Back Side 10mm	0.282	0.226	0.246	0.048	0.508	0.576
	Off	Left Edge 10mm	0.100	0.278	0.406	0.067	0.378	0.573
	Off	Right Edge 10mm	0.063	0.000	0.000	0.000	0.063	0.063
	Off	Bottom Edge 10mm	0.343	0.158	0.126	0.040	0.501	0.509

Note:

1: The simultaneous transmission combinations of the three antennas contain combinations of two antennas, so only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 0.931 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

13 TEST EQUIPMENTS LIST

Description	Manufacturer	Model	Serial No./Version	Cal. Date	Cal. Due
PC	Dell	N/A	N/A	N/A	N/A
Test Software	Speag	DASY5	52.8.8.1222	N/A	N/A
835MHz Validation Dipole	Speag	D835V2	SN: 4d187	2017/06/26	2020/06/25
1750MHz Validation Dipole	Speag	D1750V2	SN: 1130	2017/07/01	2020/06/30
1900MHz Validation Dipole	Speag	D1900V2	SN: 5d193	2017/06/30	2020/06/29
2450MHz Validation Dipole	Speag	D2450V2	SN: 952	2019/06/10	2020/06/09
2600MHz Validation Dipole	Speag	D2600V2	SN: 1095	2017/07/10	2020/07/09
5GHz Validation Dipole	Speag	D5GHzV2	SN: 1200	2017/06/29	2020/06/28
E-Field Probe	Speag	EX3DV4	SN: 7510	2019/08/02	2020/08/01
Data Acquisition Electronics	Speag	DAE4	SN: 1454	2019/08/02	2020/08/01
Signal Generator	R&S	SMBV100A	260592	2019/06/14	2020/06/13
Power Meter	R&S	NRVD-B2	7250BJ-0112/2011	2019/10/30	2020/10/29
Power Sensor	R&S	NRV-Z4	100381	2019/10/30	2020/10/29
Power Sensor	R&S	NRV-Z2	100211	2019/10/30	2020/10/29
Wireless Communication Test Set	Agilent	8960-E5515C	MY50260493	2019/06/13	2020/06/13
Wireless Communication Test Set	R&S	CMW 500	104946	2019/10/30	2020/10/29
Network Analyzer	R&S	ZVL-6	101380	2019/06/20	2020/06/19
Thermometer	Elitech	RC-4HC	N/A	2019/11/02	2020/11/01
Power Amplifier	SATIMO	6552B	22374	N/A	N/A
Dielectric Probe Kit	SATIMO	SCLMP	SN 25/13 OCPG56	N/A	N/A
Phantom1	Speag	SAM	SN: 1859	N/A	N/A
Phantom2	Speag	SAM	SN: 1857	N/A	N/A
Attenuator	COM-MW	ZA-S1-31	1305003187	N/A	N/A
Directional coupler	AA-MCS	AAMCS-UDC	000272	N/A	N/A

Note: For dipole antennas, BALUN has adopted 3 years as calibration intervals, and on annual basis, every measurement dipole has been evaluated and is in compliance with the following criteria:

1. There is no physical damage on the dipole;
2. System validation with specific dipole is within 10% of calibrated value;
3. Return-loss in within 20% of calibrated measurement.
4. Impedance (real or imaginary parts) in within 5 Ohms of calibrated measurement.

ANNEX A SIMULATING LIQUID VERIFICATION RESULT

The dielectric parameters of the liquids were verified prior to the SAR evaluation using an SCLMP Dielectric Probe Kit.

Date	Liquid Type	Fre. (MHz)	Temp. (°C)	Meas. Conductivity (σ) (S/m)	Meas. Permittivity (ϵ)	Target Conductivity (σ) (S/m)	Target Permittivity (ϵ)	Conductivity Tolerance (%)	Permittivity Tolerance (%)
2020.04.11	Head	835	21.3	0.92	40.97	0.90	41.50	2.22	-1.28
2020.04.10	Head	835	21.4	0.90	41.84	0.90	41.50	0.00	0.82
2020.04.12	Head	835	21.2	0.91	41.64	0.90	41.50	1.11	0.34
2020.03.23	Head	1750	21.3	1.36	40.33	1.37	40.08	-0.73	0.62
2020.03.24	Head	1750	21.4	1.36	40.30	1.37	40.08	-0.73	0.55
2020.03.25	Head	1900	21.2	1.40	39.69	1.40	40.00	0.00	-0.78
2020.03.26	Head	1900	21.2	1.43	39.78	1.40	40.00	2.14	-0.55
2020.04.06	Head	2450	21.5	1.83	39.02	1.80	39.20	1.67	-0.46
2020.04.07	Head	2600	21.5	1.96	39.11	1.96	39.01	0.00	0.26
2020.04.08	Head	2600	21.6	1.99	38.62	1.96	39.01	1.53	-1.00
2020.04.09	Head	2600	21.4	1.99	39.54	1.96	39.01	1.53	1.36
2020.04.01	Head	5250	21.2	4.75	36.29	4.71	35.93	0.85	1.00
2020.04.02	Head	5600	21.3	5.13	34.73	5.07	35.53	1.18	-2.25
2020.04.03	Head	5750	21.4	5.29	34.47	5.22	35.36	1.34	-2.52

Note: The tolerance limit of Conductivity and Permittivity is $\pm 5\%$.

ANNEX B SYSTEM CHECK RESULT

Comparing to the original SAR value provided by SPEAG, the validation data should be within its specification of 10 %(for 1 g).

Date	Liquid Type	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)	Targeted SAR(W/kg)	Tolerance (%)
2020.04.11	Head	835	100	0.994	9.94	9.75	1.95	9.56	3.97
2020.04.10	Head	835	100	0.936	9.36	9.75	-4.00	9.56	-2.09
2020.04.12	Head	835	100	0.942	9.42	9.75	-3.38	9.56	-1.46
2020.03.23	Head	1750	100	3.670	36.70	36.90	-0.54	36.40	0.82
2020.03.24	Head	1750	100	3.750	37.50	36.90	1.63	36.40	3.02
2020.03.25	Head	1900	100	4.160	41.60	39.90	4.26	39.70	4.79
2020.03.26	Head	1900	100	4.080	40.80	39.90	2.26	39.70	2.77
2020.04.06	Head	2450	100	5.320	53.20	52.60	1.14	52.40	1.53
2020.04.07	Head	2600	100	5.520	55.20	56.40	-2.13	55.30	-0.18
2020.04.08	Head	2600	100	5.480	54.80	56.40	-2.84	55.30	-0.90
2020.04.09	Head	2600	100	5.670	56.70	56.40	0.53	55.30	2.53
2020.04.01	Head	5250	100	7.440	74.40	76.20	-2.36	76.50	-2.75
2020.04.02	Head	5600	100	8.290	82.90	82.60	0.36	83.30	-0.48
2020.04.03	Head	5750	100	8.170	81.70	80.80	1.11	78.00	4.74

Note: The tolerance limit of System validation $\pm 10\%$.

System Performance Check Data (835MHz Head)

Date: 2020.04.11

Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835$ MHz; $\sigma = 0.916$ S/m; $\epsilon_r = 40.973$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.4 Liquid Temperature: 21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 835 100mW/Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.13 W/kg

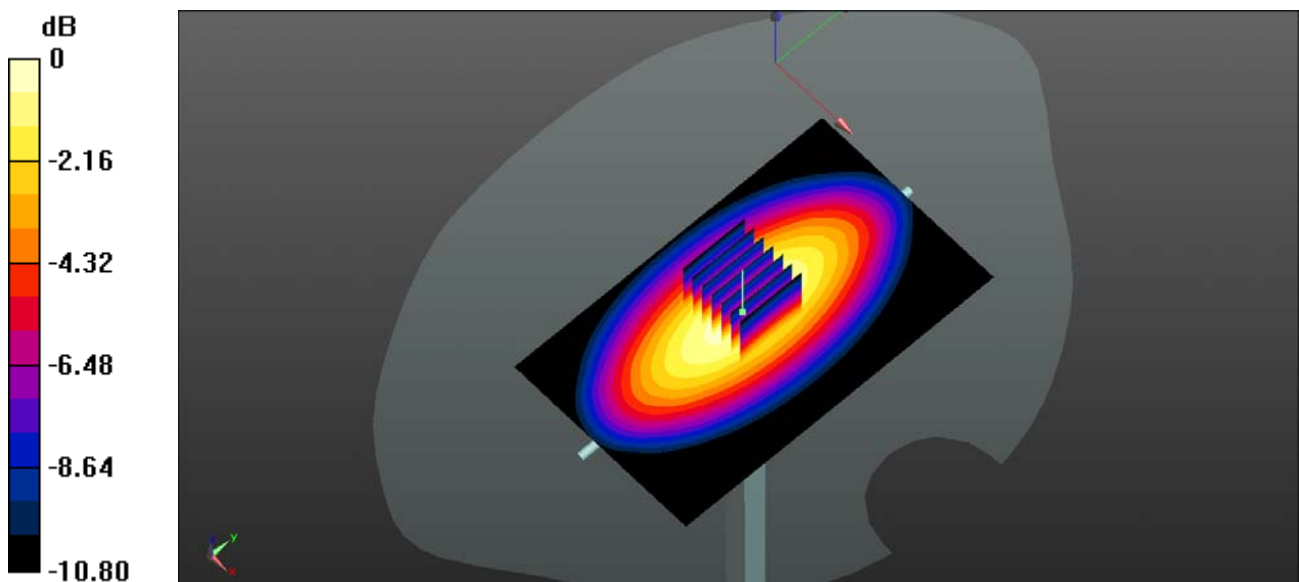
CW 835 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 33.83 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.49 W/kg

SAR(1 g) = 0.994 W/kg; SAR(10 g) = 0.645 W/kg

Maximum value of SAR (measured) = 1.15 W/kg



0 dB = 1.15 W/kg

System Performance Check Data (835MHz Head)

Date: 2020.04.10

Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835$ MHz; $\sigma = 0.898$ S/m; $\epsilon_r = 41.842$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.5 Liquid Temperature: 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 835 100mW/Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.04 W/kg

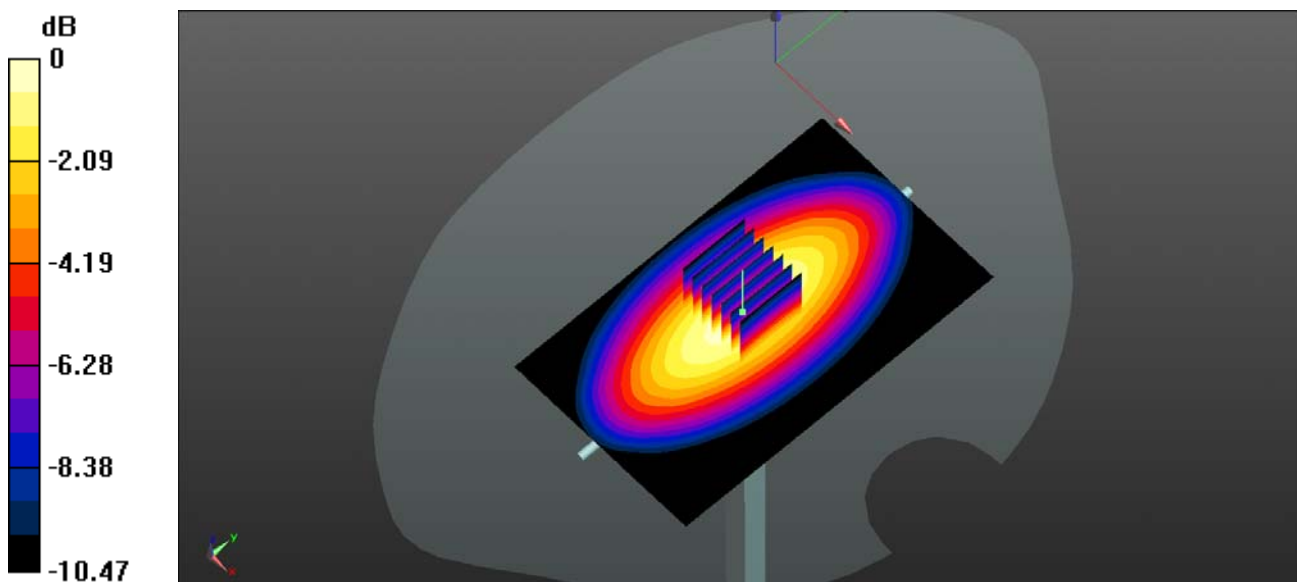
CW 835 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 33.25 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 1.46 W/kg

SAR(1 g) = 0.936 W/kg; SAR(10 g) = 0.627 W/kg

Maximum value of SAR (measured) = 1.06 W/kg



0 dB = 1.06 W/kg

System Performance Check Data (835MHz Head)

Date: 2020.04.12

Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.906 \text{ S/m}$; $\epsilon_r = 41.635$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient Temperature: 22.4 Liquid Temperature: 21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 835 100mW/Area Scan (61x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 1.12 W/kg

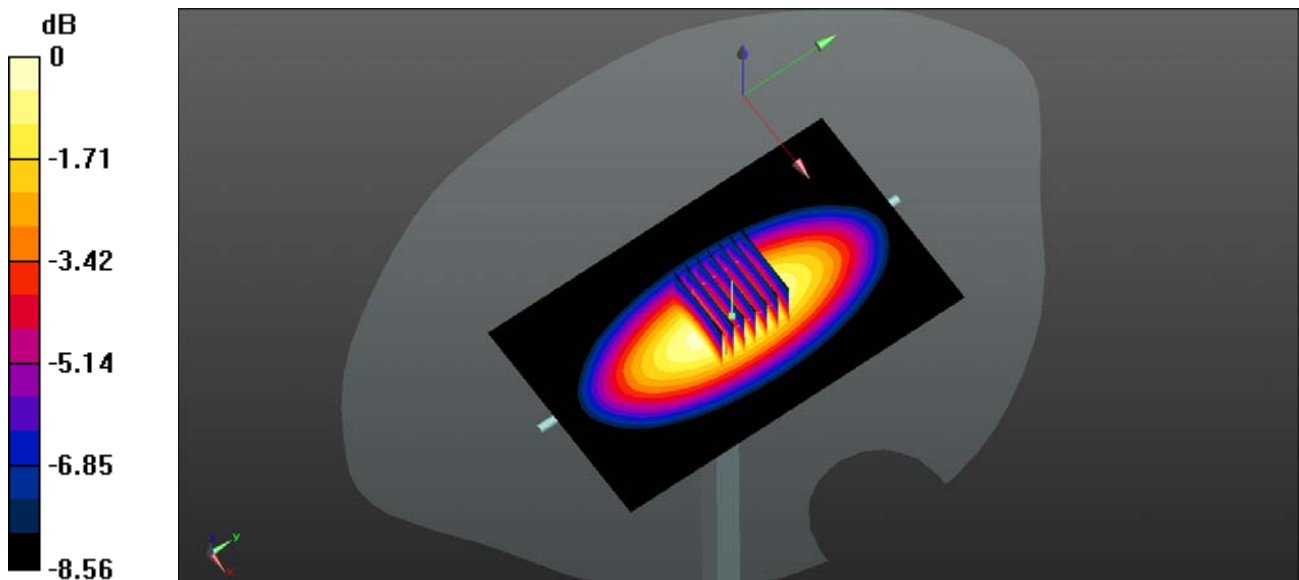
CW 835 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 34.13 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.42 W/kg

SAR(1 g) = 0.942 W/kg; SAR(10 g) = 0.633 W/kg

Maximum value of SAR (measured) = 1.09 W/kg



0 dB = 1.09 W/kg

System Performance Check Data (1750MHz Head)

Date: 2020.03.23

Communication System Band: D1750 (1750.0 MHz); Frequency: 1750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.358$ S/m; $\epsilon_r = 40.326$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.5 Liquid Temperature: 21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.67, 8.67, 8.67); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Head-1750 MHz-100mW/Area Scan (101x101x1): Interpolated grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 4.17 W/kg

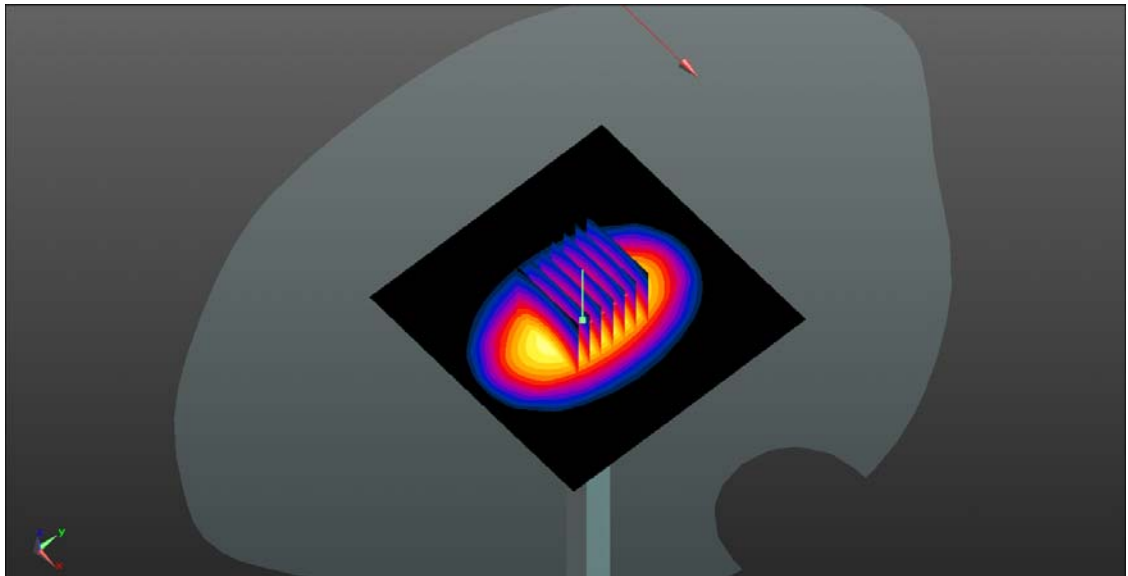
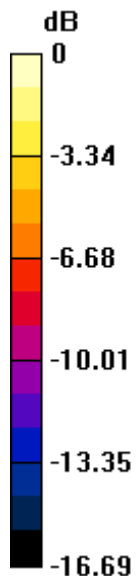
Head-1750 MHz-100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 51.74V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 6.28 W/kg

SAR(1 g) = 3.67 W/kg; SAR(10 g) = 1.92 W/kg

Maximum value of SAR (measured) = 4.06 W/kg



0 dB = 4.06 W/kg

System Performance Check Data (1750MHz Head)

Date: 2020.03.24

Communication System Band: D1750 (1750.0 MHz); Frequency: 1750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.361$ S/m; $\epsilon_r = 40.304$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.6 Liquid Temperature: 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.67, 8.67, 8.67); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 1750 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 4.21 W/kg

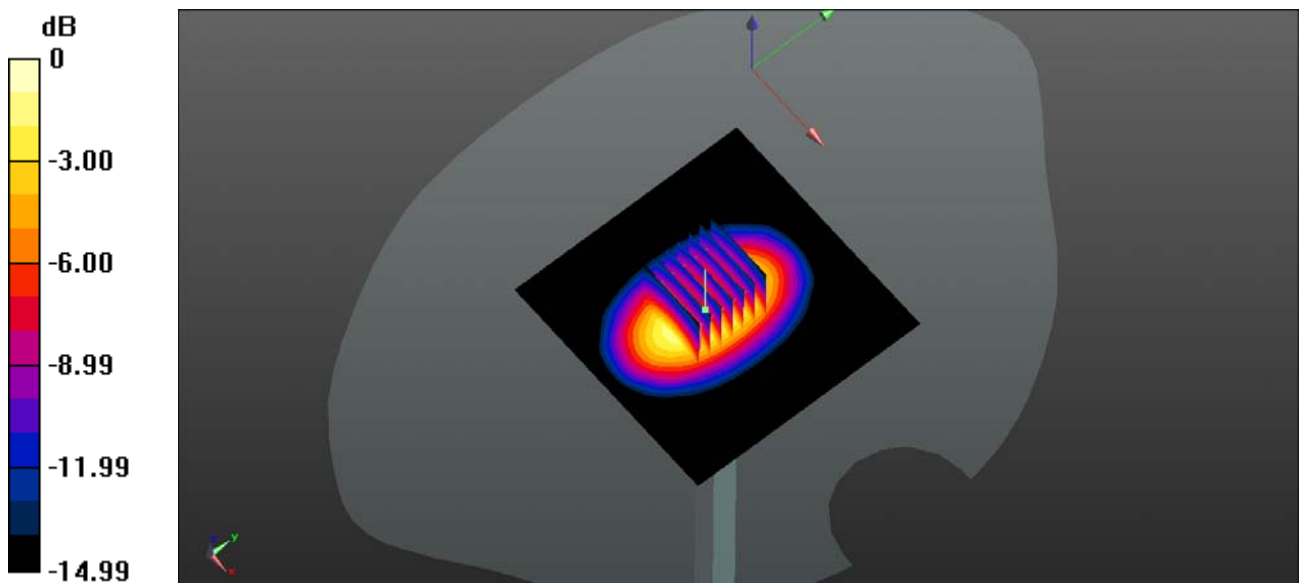
CW 1750 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54.48 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 6.51 W/kg

SAR(1 g) = 3.75 W/kg; SAR(10 g) = 2.02 W/kg

Maximum value of SAR (measured) = 4.23 W/kg



0 dB = 4.23 W/kg

System Performance Check Data (1900MHz Head)

Date: 2020.03.25

Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.403$ S/m; $\epsilon_r = 39.688$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.6 Liquid Temperature: 21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.38, 8.38, 8.38); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 1900 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 4.57 W/kg

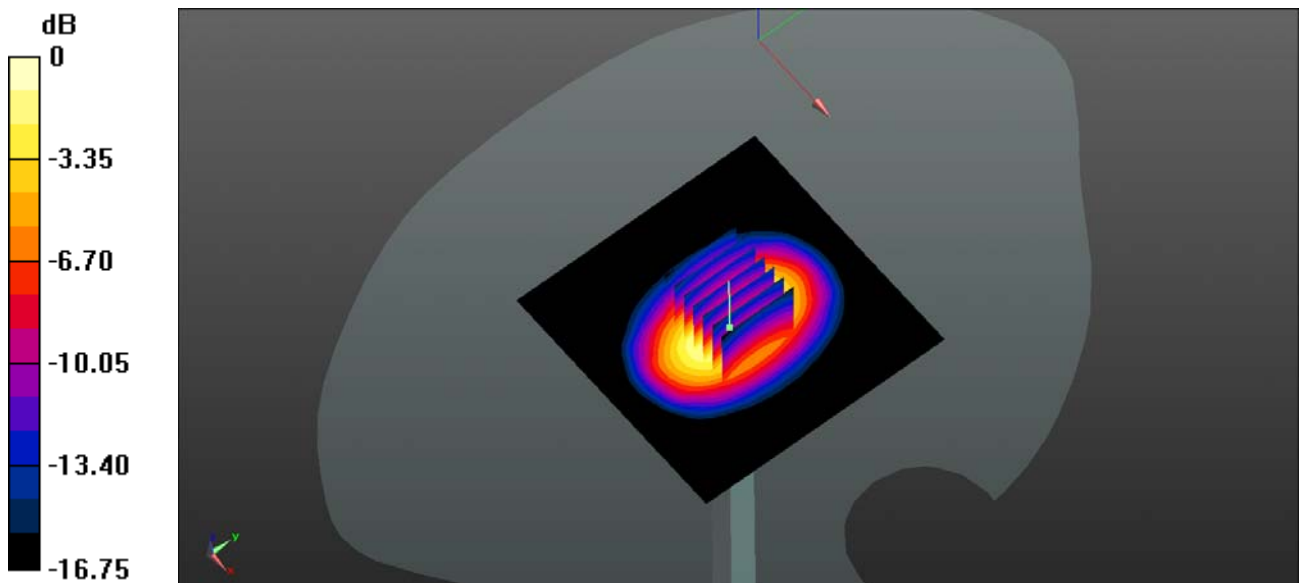
CW 1900 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.89 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 7.37 W/kg

SAR(1 g) = 4.16 W/kg; SAR(10 g) = 2.13 W/kg

Maximum value of SAR (measured) = 4.62 W/kg



0 dB = 4.62 W/kg

System Performance Check Data (1900MHz Head)

Date: 2020.03.26

Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.432$ S/m; $\epsilon_r = 39.778$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.5 Liquid Temperature: 21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.38, 8.38, 8.38); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 1900 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 4.57 W/kg

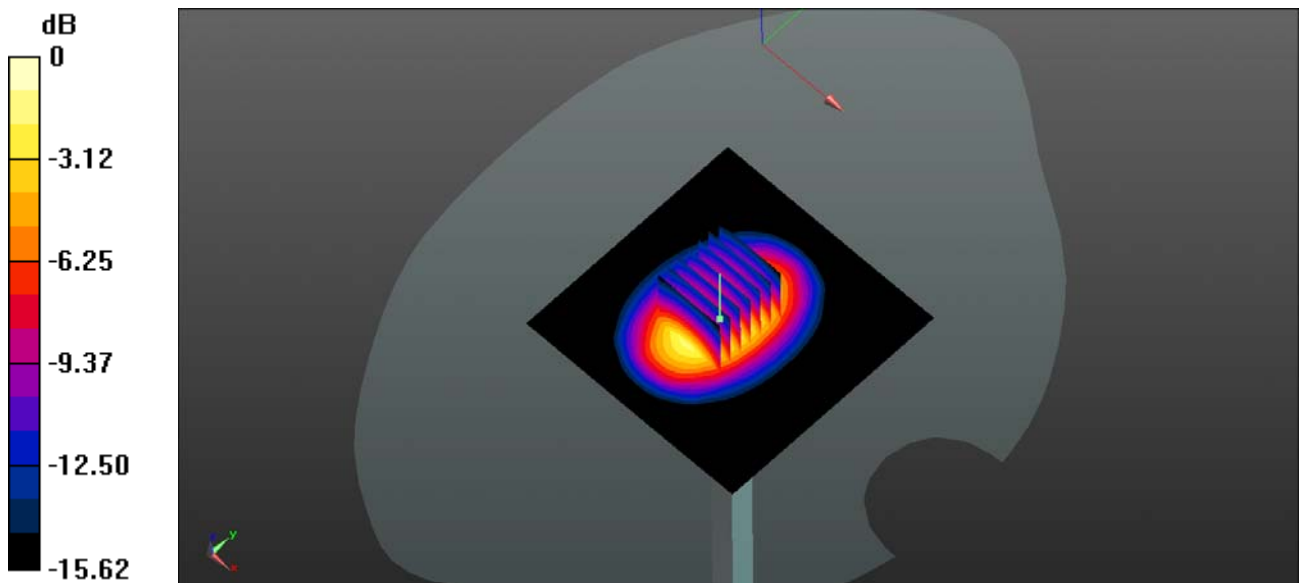
CW 1900 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.29 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 7.32 W/kg

SAR(1 g) = 4.08 W/kg; SAR(10 g) = 2.02 W/kg

Maximum value of SAR (measured) = 4.62 W/kg



0 dB = 4.62 W/kg

System Performance Check Data (2450MHz Head)

Date: 2020.04.06

Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.825$ S/m; $\epsilon_r = 39.016$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.5 Liquid Temperature: 21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.81, 7.81, 7.81); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 2450 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 6.19 W/kg

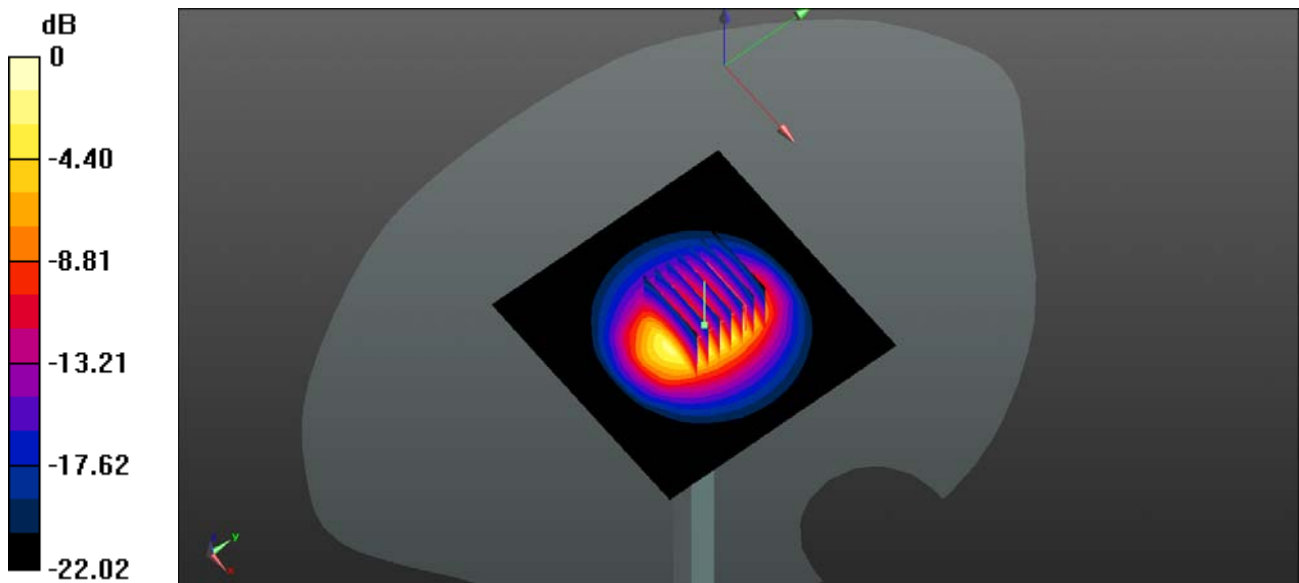
CW 2450 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.62 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 10.82 W/kg

SAR(1 g) = 5.32 W/kg; SAR(10 g) = 2.42 W/kg

Maximum value of SAR (measured) = 6.12 W/kg



0 dB = 6.12 W/kg

System Performance Check Data (2600MHz Head)

Date: 2020.04.07

Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2600$ MHz; $\sigma = 1.962$ S/m; $\epsilon_r = 39.109$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.6 Liquid Temperature: 21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.61, 7.61, 7.61); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 2600 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 6.72 W/kg

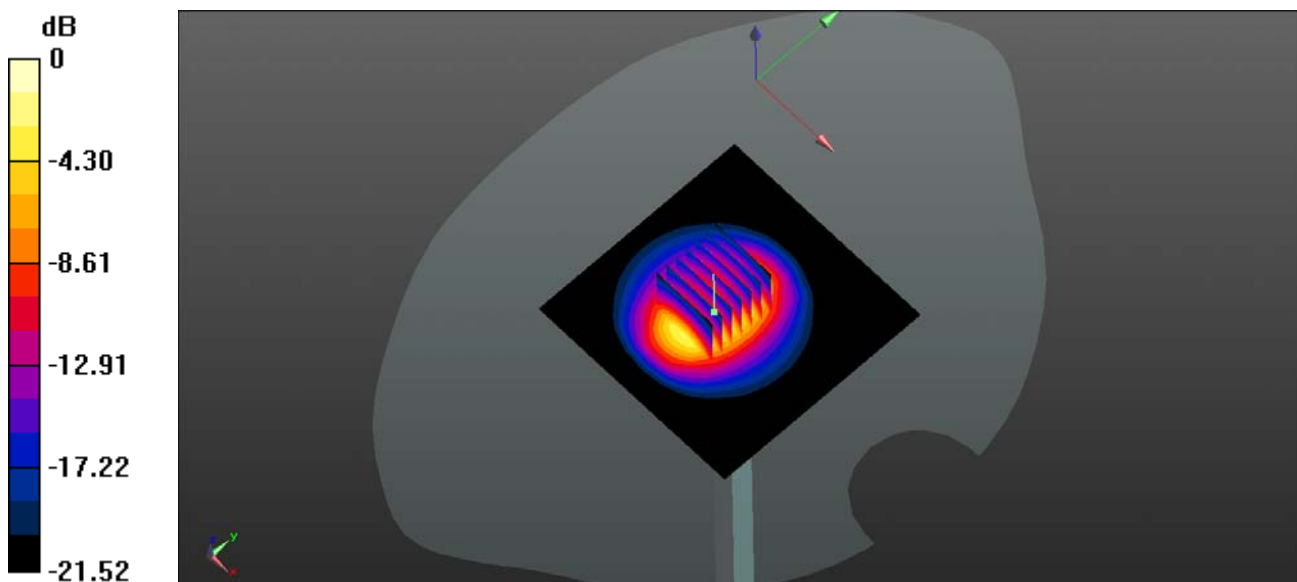
CW 2600 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 52.65 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 11.26 W/kg

SAR(1 g) = 5.52 W/kg; SAR(10 g) = 2.48 W/kg

Maximum value of SAR (measured) = 6.68 W/kg



System Performance Check Data (2600MHz Head)

Date: 2020.04.08

Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2600$ MHz; $\sigma = 1.994$ S/m; $\epsilon_r = 38.615$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.6 Liquid Temperature: 21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.61, 7.61, 7.61); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 2600 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 6.27 W/kg

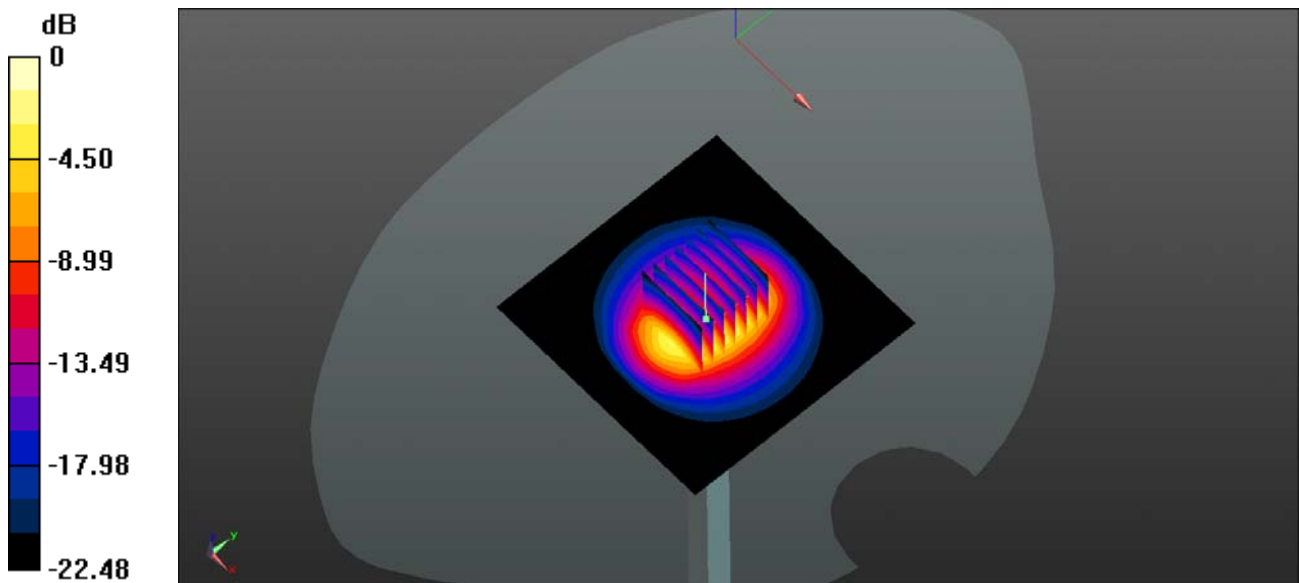
CW 2600 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.13 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 10.9 W/kg

SAR(1 g) = 5.48 W/kg; SAR(10 g) = 2.43 W/kg

Maximum value of SAR (measured) = 6.18 W/kg



0 dB = 6.18 W/kg

System Performance Check Data (2600MHz Head)

Date: 2020.04.09

Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2600$ MHz; $\sigma = 1.993$ S/m; $\epsilon_r = 39.537$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.5 Liquid Temperature: 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.61, 7.61, 7.61); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 2600 100mW /Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 6.63 W/kg

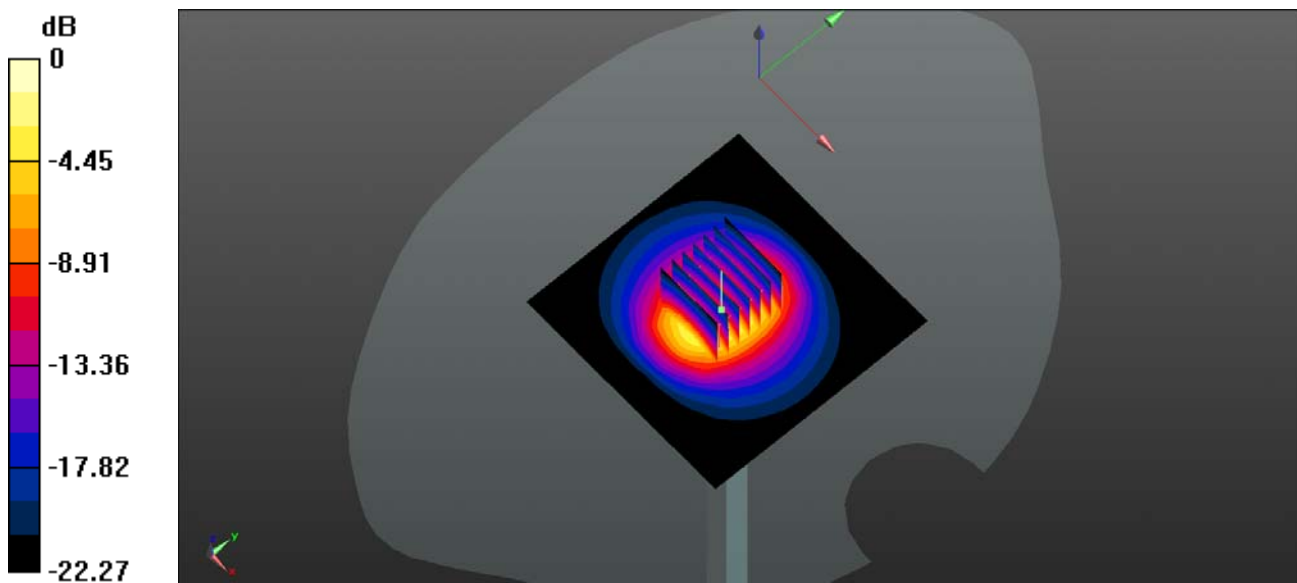
CW 2600 100mW /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 56.98 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 13.1 W/kg

SAR(1 g) = 5.67 W/kg; SAR(10 g) = 2.52 W/kg

Maximum value of SAR (measured) = 6.69 W/kg



0 dB = 6.69 W/kg

System Performance Check Data (5250MHz Head)

Date: 2020.04.01

Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5250 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5250$ MHz; $\sigma = 4.748$ S/m; $\epsilon_r = 36.29$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.6 Liquid Temperature: 21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.51, 5.51, 5.51); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 5250 100mW /Area Scan (81x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 7.96 W/kg

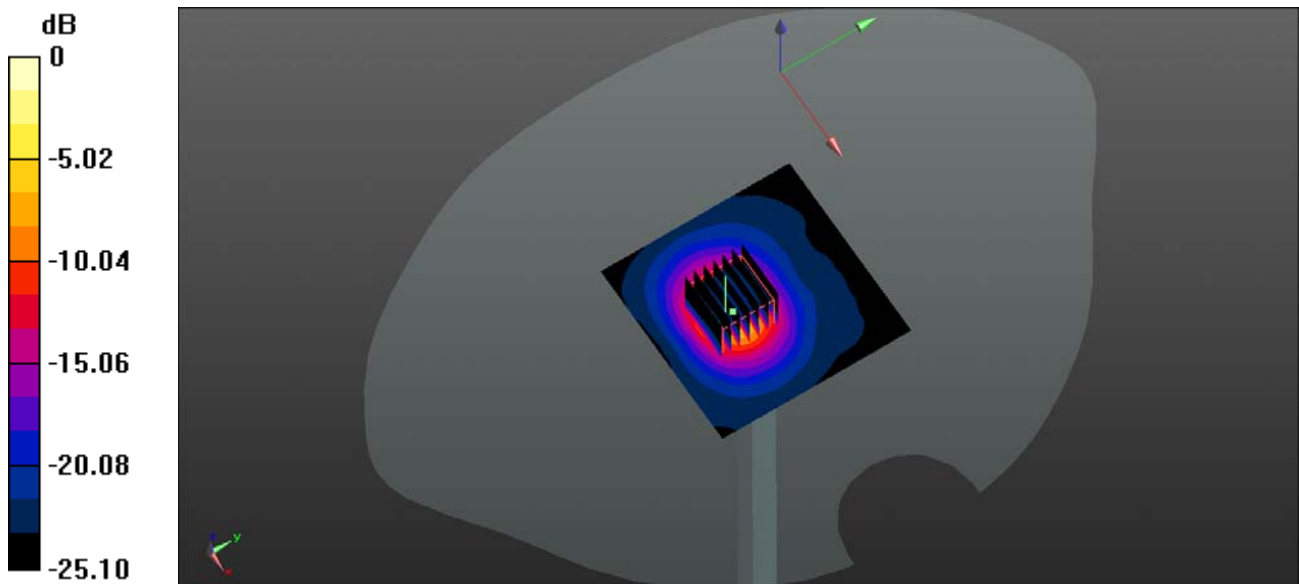
CW 5250 100mW /Zoom Scan (7x7x15)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 25.72 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 32.8 W/kg

SAR(1 g) = 7.44 W/kg; SAR(10 g) = 2.12 W/kg

Maximum value of SAR (measured) = 14.9 W/kg



0 dB = 14.9 W/kg

System Performance Check Data (5600MHz Head)

Date: 2020.04.02

Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.127$ S/m; $\epsilon_r = 34.732$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.6 Liquid Temperature: 21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.8, 4.8, 4.8); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 5600 100mW /Area Scan (81x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 8.48 W/kg

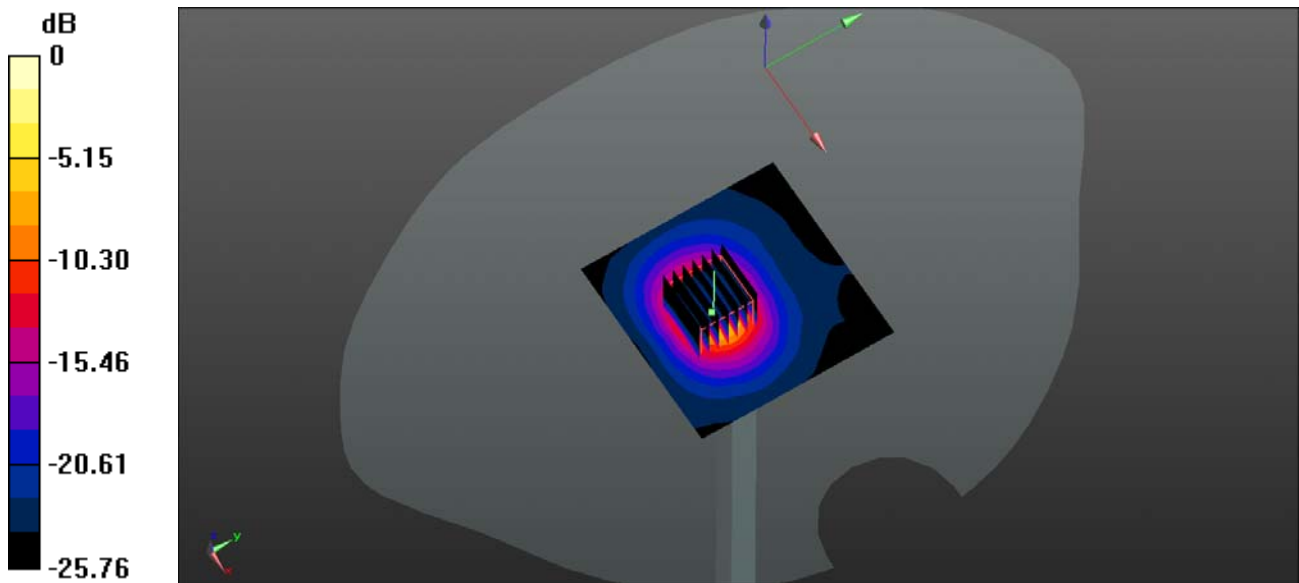
CW 5600 100mW /Zoom Scan (7x7x15)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 22.13 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 37.85 W/kg

SAR(1 g) = 8.29 W/kg; SAR(10 g) = 2.31 W/kg

Maximum value of SAR (measured) = 16.7 W/kg



0 dB = 16.7 W/kg

System Performance Check Data (5750MHz Head)

Date: 2020.04.03

Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5750$ MHz; $\sigma = 5.29$ S/m; $\epsilon_r = 34.474$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.5 Liquid Temperature: 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.06, 5.06, 5.06); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 5750 100mW/Area Scan (81x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 8.84 W/kg

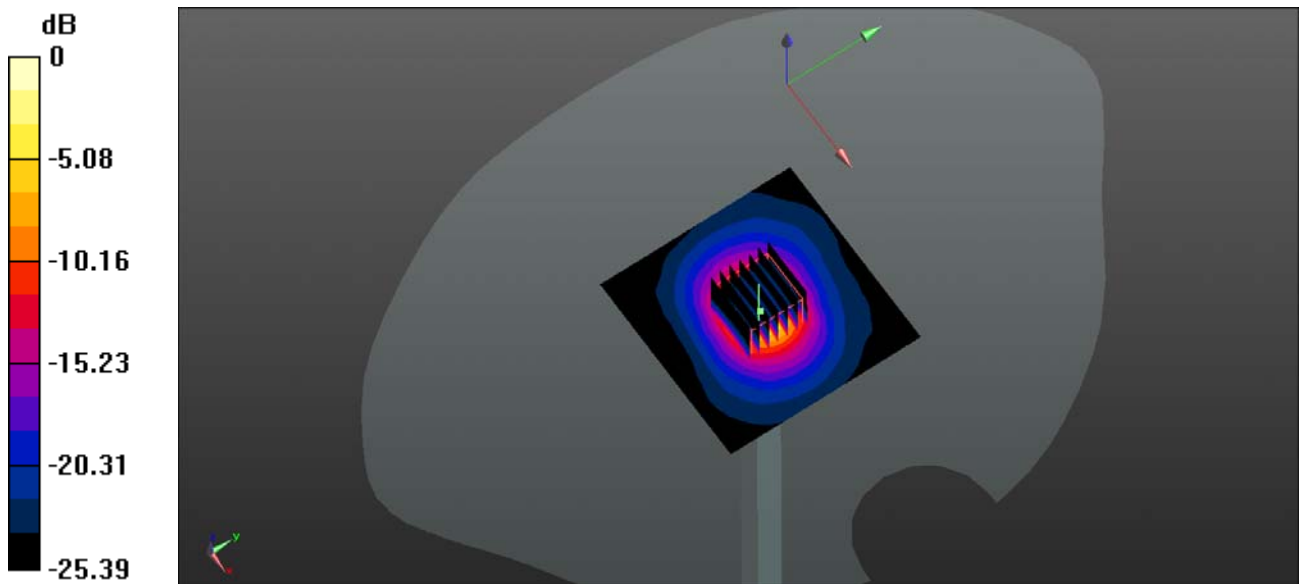
CW 5750 100mW/Zoom Scan (7x7x15)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 39.63 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 36.5 W/kg

SAR(1 g) = 8.17 W/kg; SAR(10 g) = 2.23 W/kg

Maximum value of SAR (measured) = 15.8 W/kg



0 dB = 15.8 W/kg

ANNEX C TEST DATA

MEAS.1 Right Head with Cheek on High Channel in GPRS850 2Slots mode with Up Antenna

Date: 2020.04.11

Communication System Band: GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:4.15

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.932$ S/m; $\epsilon_r = 40.226$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature:22.4 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 251/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.04 W/kg

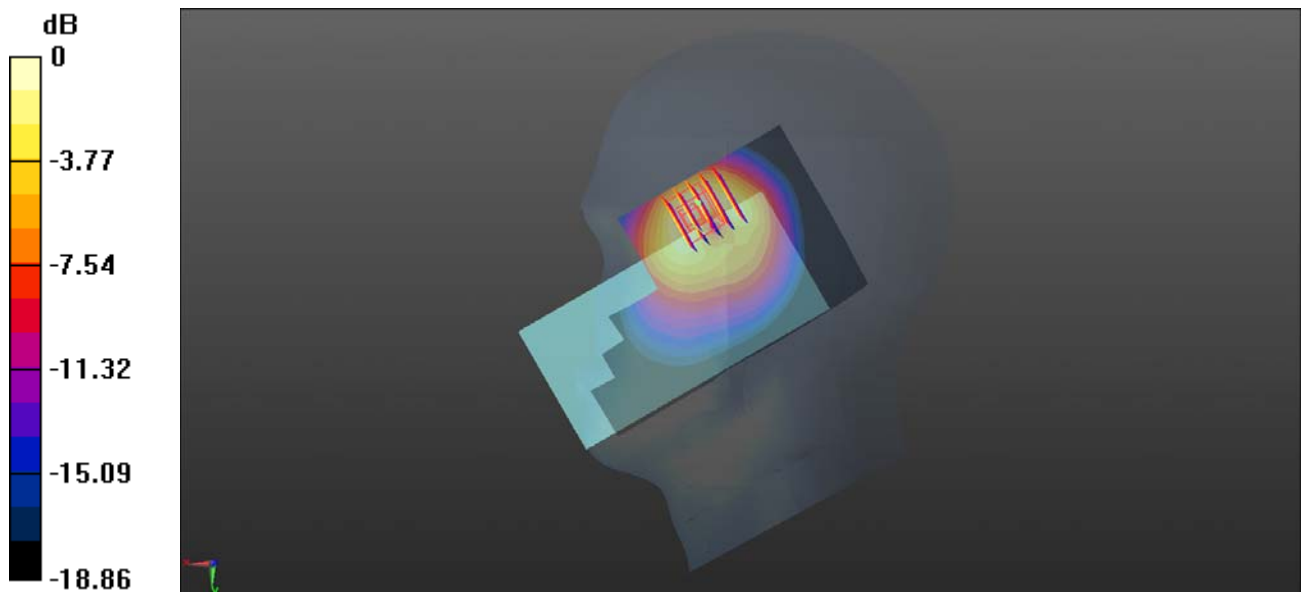
Ch 251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.925 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 2.58 W/kg

SAR(1 g) = 1.12 W/kg; SAR(10 g) = 0.547 W/kg

Maximum value of SAR (measured) = 1.19 W/kg



0 dB = 1.19 W/kg

MEAS.2 Body Plane with Back Side 10mm on High Channel in GPRS850 2Slots mode with Up Antenna

Date: 2020.04.11

Communication System Band: GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:4.15

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.932$ S/m; $\epsilon_r = 40.226$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

251/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.511 W/kg

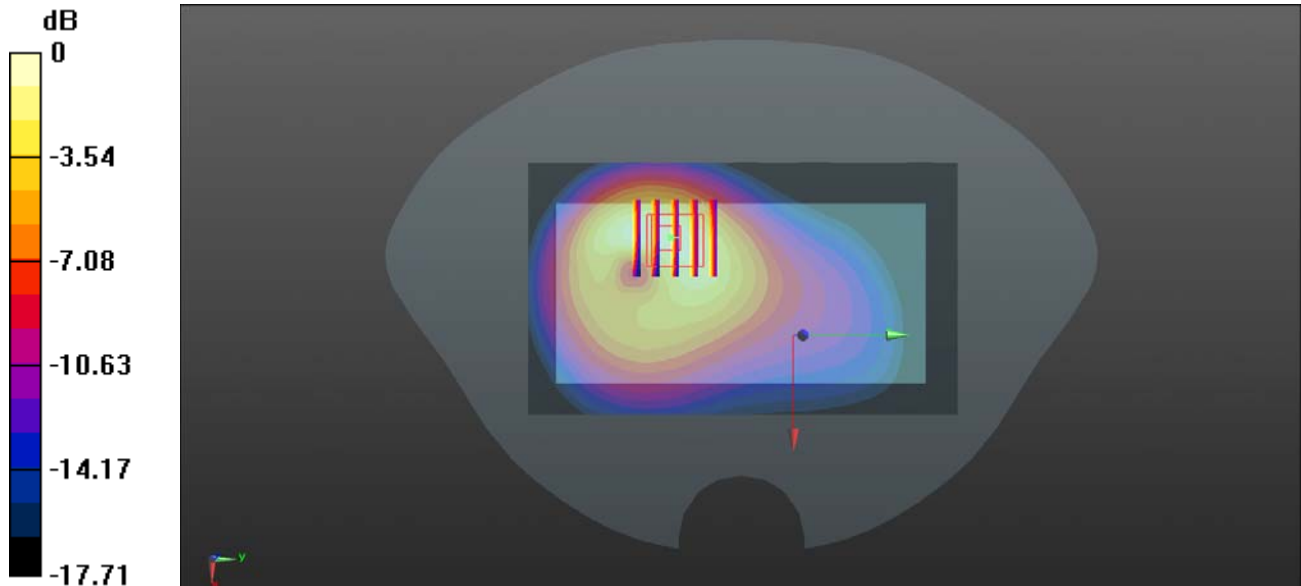
251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.772 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.942 W/kg

SAR(1 g) = 0.526 W/kg; SAR(10 g) = 0.290 W/kg

Maximum value of SAR (measured) = 0.586 W/kg



0 dB = 0.586 W/kg

MEAS.3 Right Head with Cheek on High Channel in GPRS1900 1Slots mode with Up Antenna

Date: 2020.03.25

Communication System Band: GPRS1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.374$ S/m; $\epsilon_r = 40.188$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature:22.6 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.38, 8.38, 8.38); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 512/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.26 W/kg

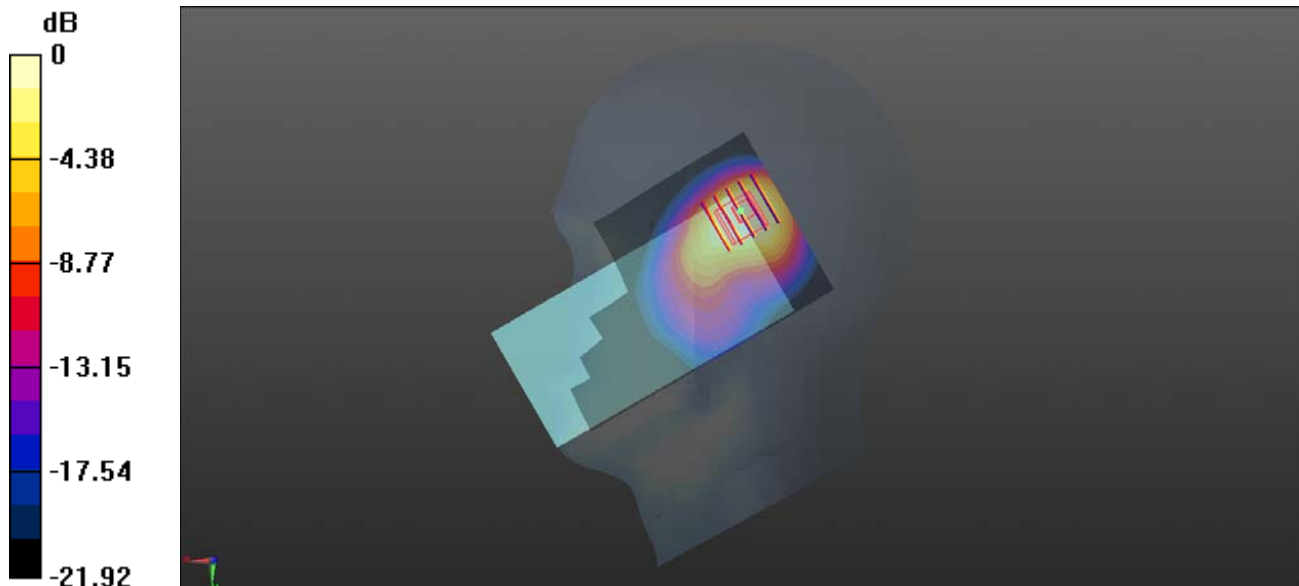
Ch 512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.27 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 2.08 W/kg

SAR(1 g) = 1.03 W/kg; SAR(10 g) = 0.492 W/kg

Maximum value of SAR (measured) = 1.11 W/kg



0 dB = 1.11 W/kg

MEAS.4 Body Plane with Back Side 10mm on Low Channel in GPRS1900 1Slots with mode Up Antenna

Date: 2020.03.25

Communication System Band: GPRS1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.374$ S/m; $\epsilon_r = 40.188$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.6 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.38, 8.38, 8.38); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 512/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.359 W/kg

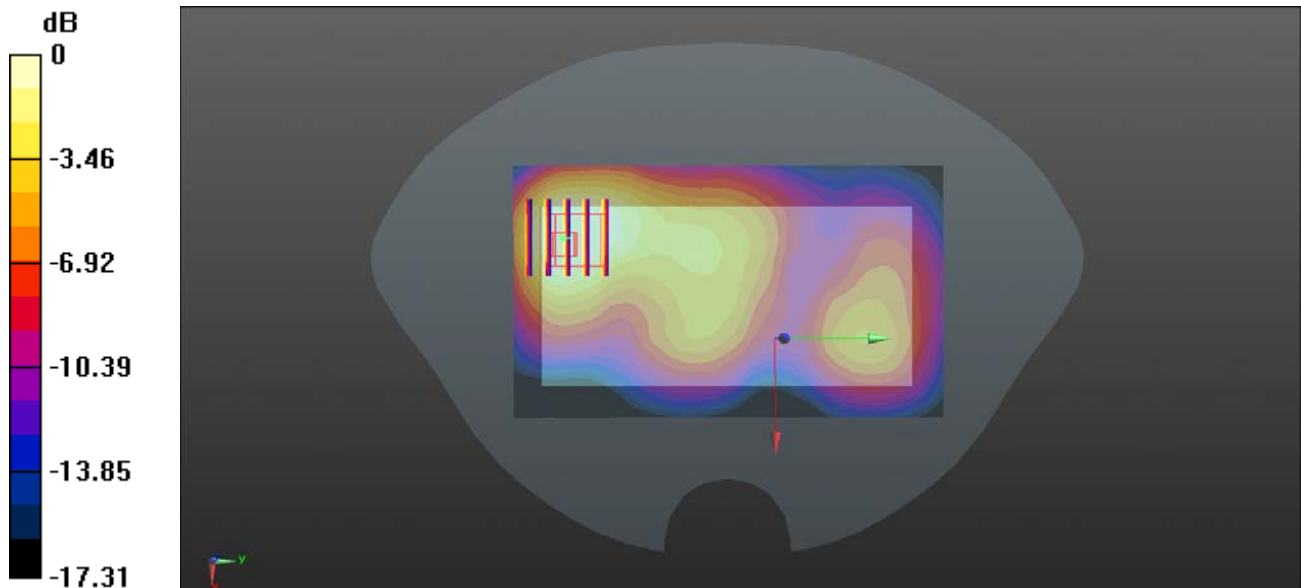
Ch 512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.801 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.482 W/kg

SAR(1 g) = 0.277 W/kg; SAR(10 g) = 0.162 W/kg

Maximum value of SAR (measured) = 0.293 W/kg



0 dB = 0.293 W/kg

MEAS.5 Right Head with Cheek on Middle Channel in WCDMA Band 2 mode with Up Antenna

Date: 2020.03.25

Communication System Band: II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.392$ S/m; $\epsilon_r = 39.927$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature:22.6 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.38, 8.38, 8.38); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 9400/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.928 W/kg

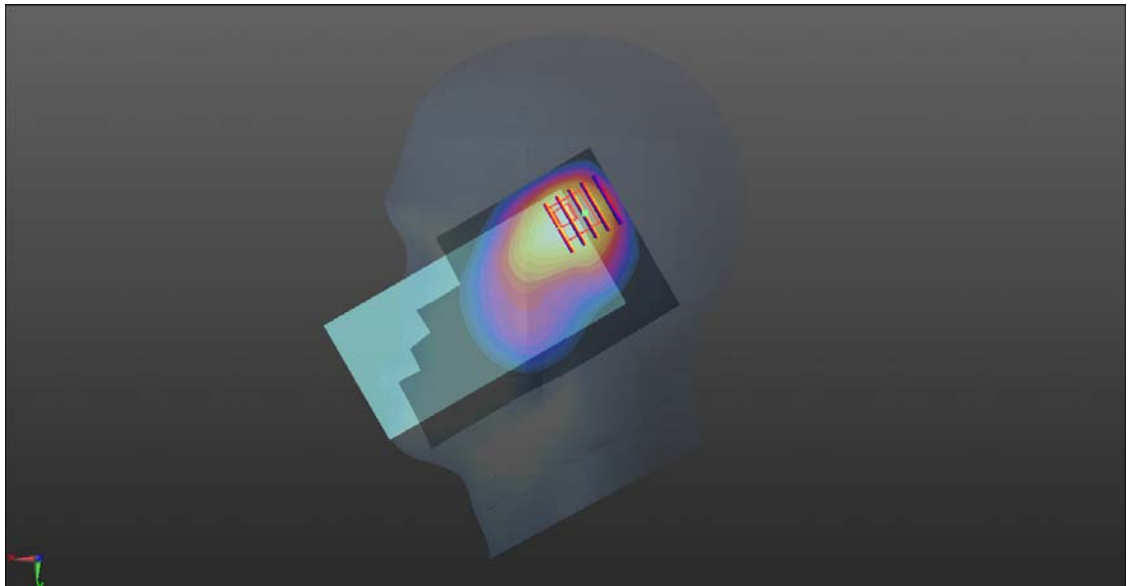
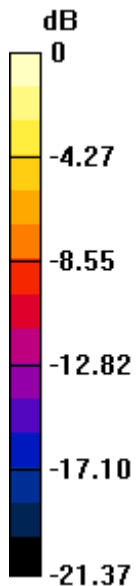
Ch 9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.82 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.77 W/kg

SAR(1 g) = 0.832 W/kg; SAR(10 g) = 0.422 W/kg

Maximum value of SAR (measured) = 0.994 W/kg



0 dB = 0.994 W/kg

MEAS.6 Body Plane with Bottom Edge 10mm on Middle Channel in WCDMA Band 2 mode with Down Antenna

Date: 2020.03.25

Communication System Band: II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.392$ S/m; $\epsilon_r = 39.927$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.6 Liquid Temperature: 21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.38, 8.38, 8.38); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 9400/Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.749 W/kg

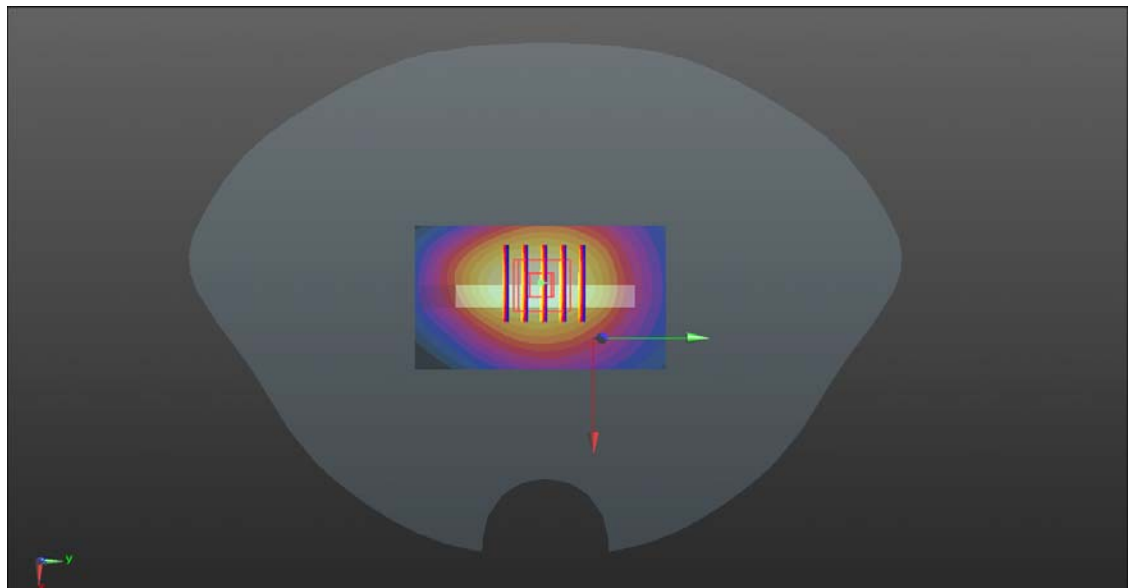
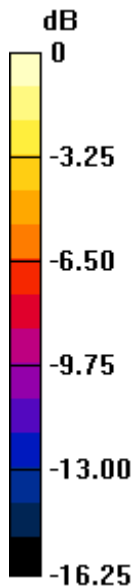
Ch 9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.52 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.657 W/kg; SAR(10 g) = 0.385 W/kg

Maximum value of SAR (measured) = 0.721 W/kg



0 dB = 0.721 W/kg

MEAS.7 Right Head with Cheek on Middle Channel in WCDMA Band 4 mode with Up Antenna

Date: 2020.03.23

Communication System Band: IV; Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.4$ MHz; $\sigma = 1.345$ S/m; $\epsilon_r = 40.726$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature:22.5 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.67, 8.67, 8.67); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 1412/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.903 W/kg

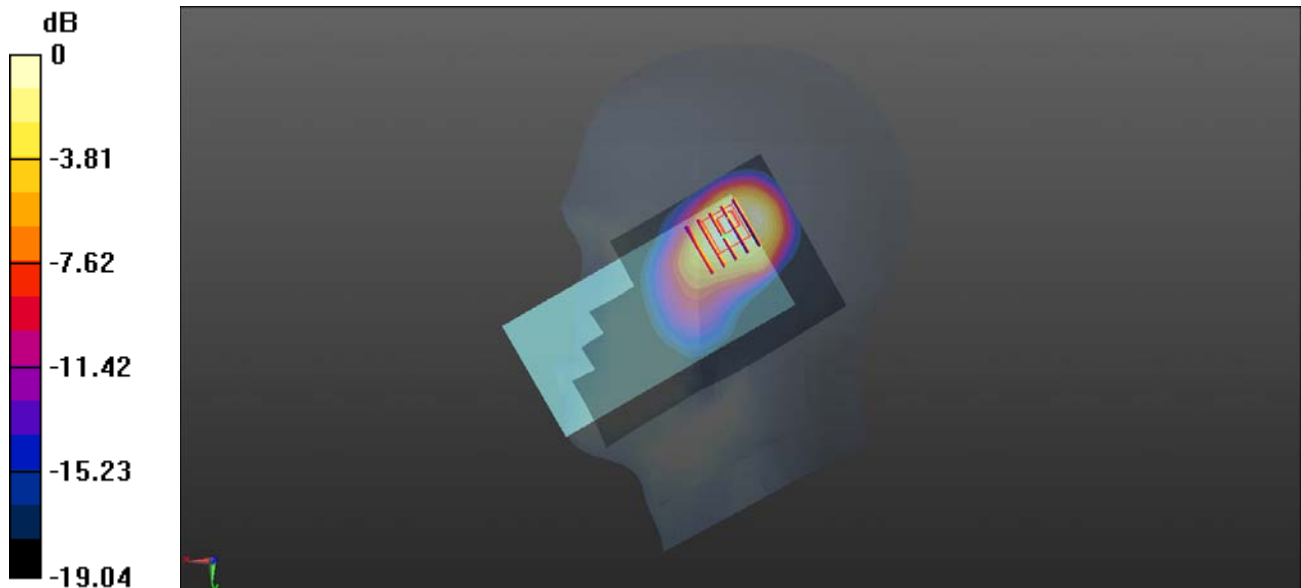
Ch 1412/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.50 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.66 W/kg

SAR(1 g) = 0.858 W/kg; SAR(10 g) = 0.468 W/kg

Maximum value of SAR (measured) = 0.988 W/kg



0 dB = 0.988 W/kg

MEAS.8 Body Plane with Bottom Edge 10mm on High Channel in WCDMA Band 4 mode with Down Antenna

Date: 2020.03.23

Communication System Band: IV; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1752.6$ MHz; $\sigma = 1.367$ S/m; $\epsilon_r = 40.24$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.5 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.67, 8.67, 8.67); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 1513/Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.715 W/kg

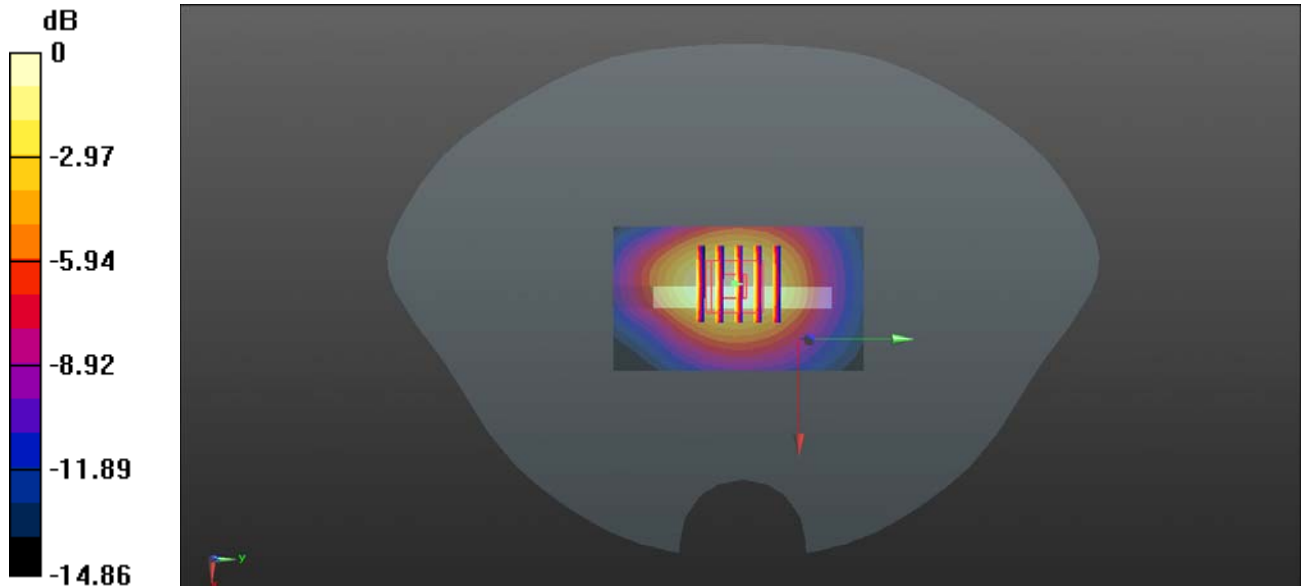
Ch 1513/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.48 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.991 W/kg

SAR(1 g) = 0.630 W/kg; SAR(10 g) = 0.382 W/kg

Maximum value of SAR (measured) = 0.686 W/kg



0 dB = 0.686 W/kg

MEAS.9 Right Head with Cheek on High Channel in WCDMA Band 5 mode with Up Antenna

Date: 2020.04.11

Communication System Band: V; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 846.6$ MHz; $\sigma = 0.925$ S/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature:22.4 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 4233/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.878 W/kg

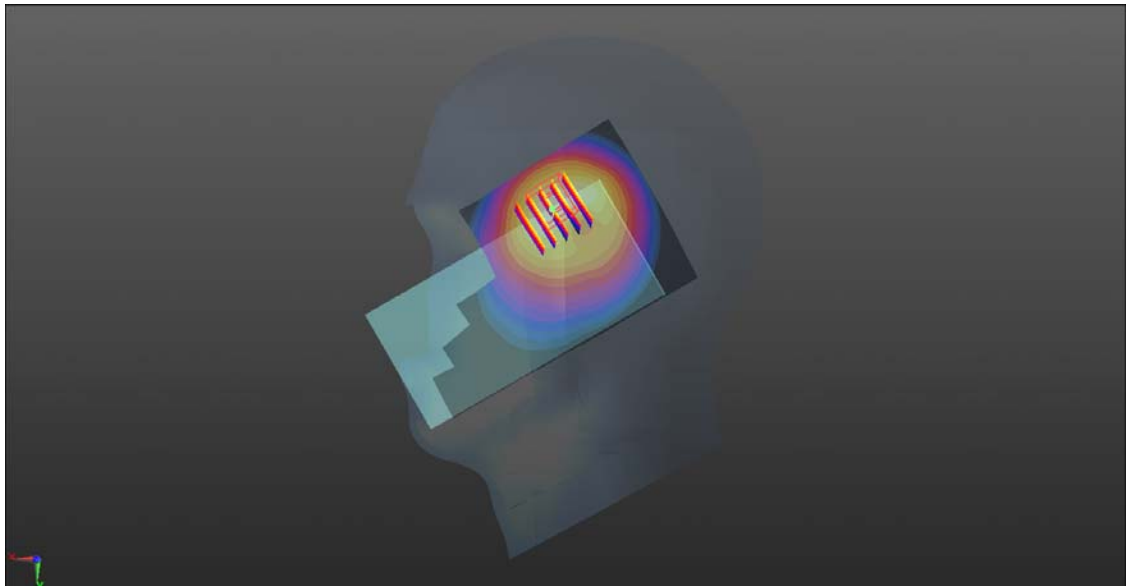
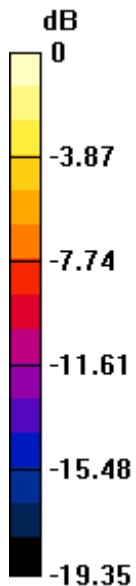
Ch 4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.25 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 1.59 W/kg

SAR(1 g) = 0.766 W/kg; SAR(10 g) = 0.380 W/kg

Maximum value of SAR (measured) = 0.873 W/kg



0 dB = 0.873 W/kg

MEAS.10 Body Plane with Back Side 10mm on High Channel in WCDMA Band 5 mode with Up Antenna

Date: 2020.04.11

Communication System Band: V; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 846.6$ MHz; $\sigma = 0.925$ S/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 4233/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.573 W/kg

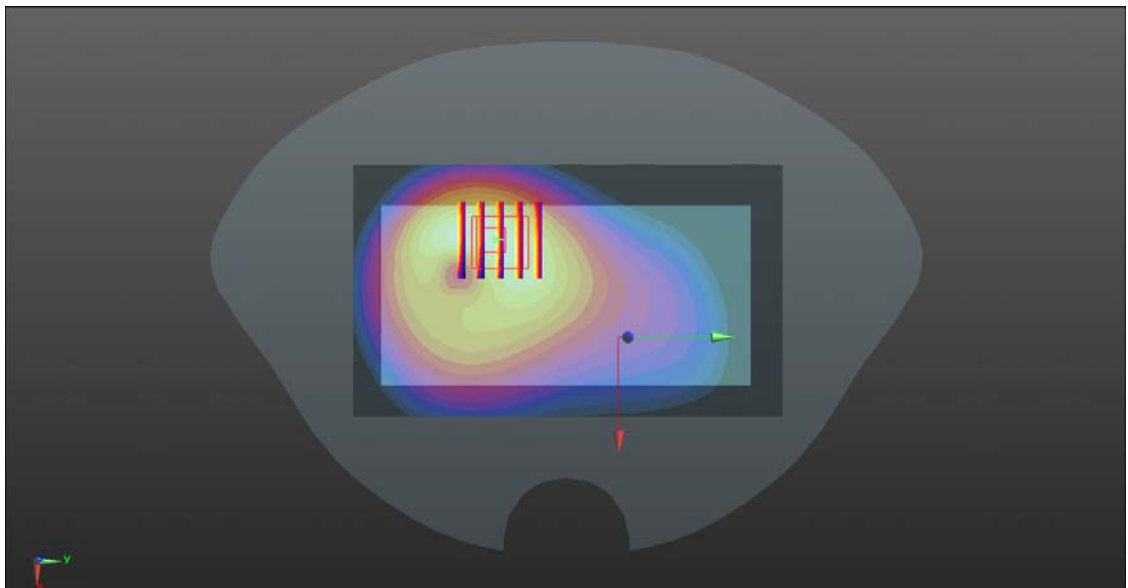
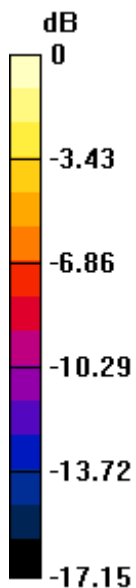
Ch 4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.27 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.926 W/kg

SAR(1 g) = 0.522 W/kg; SAR(10 g) = 0.296 W/kg

Maximum value of SAR (measured) = 0.579 W/kg



0 dB = 0.579 W/kg

MEAS.11 Right Head with Cheek on Low Channel in LTE Band 2 mode with Up Antenna 1RB

Date: 2020.03.26

Communication System Band: Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz); Frequency: 1860 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1860$ MHz; $\sigma = 1.406$ S/m; $\epsilon_r = 40.644$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.38, 8.38, 8.38); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 18700/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.785 W/kg

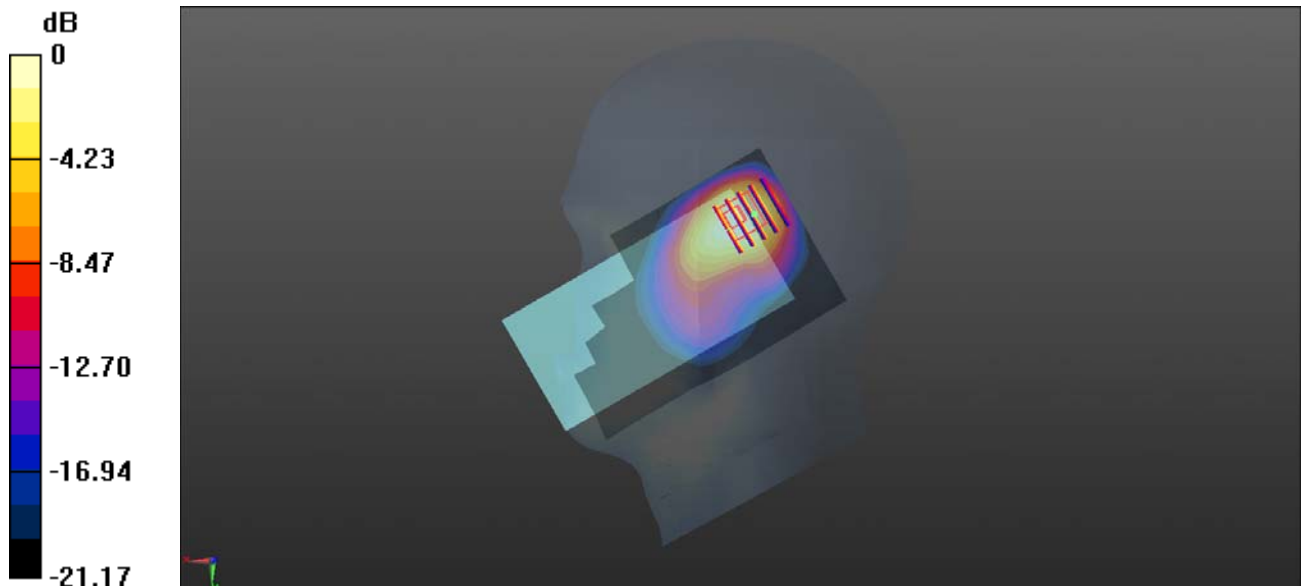
Ch 18700/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.87 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.49 W/kg

SAR(1 g) = 0.719 W/kg; SAR(10 g) = 0.368 W/kg

Maximum value of SAR (measured) = 0.812 W/kg



0 dB = 0.812 W/kg

MEAS.12 Body Plane with Bottom Edge 10mm on Middle Channel in LTE Band 2 mode with Down Antenna 1RB

Date: 2020.03.26

Communication System Band: Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.448$ S/m; $\epsilon_r = 40.275$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.38, 8.38, 8.38); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 18900/Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.656 W/kg

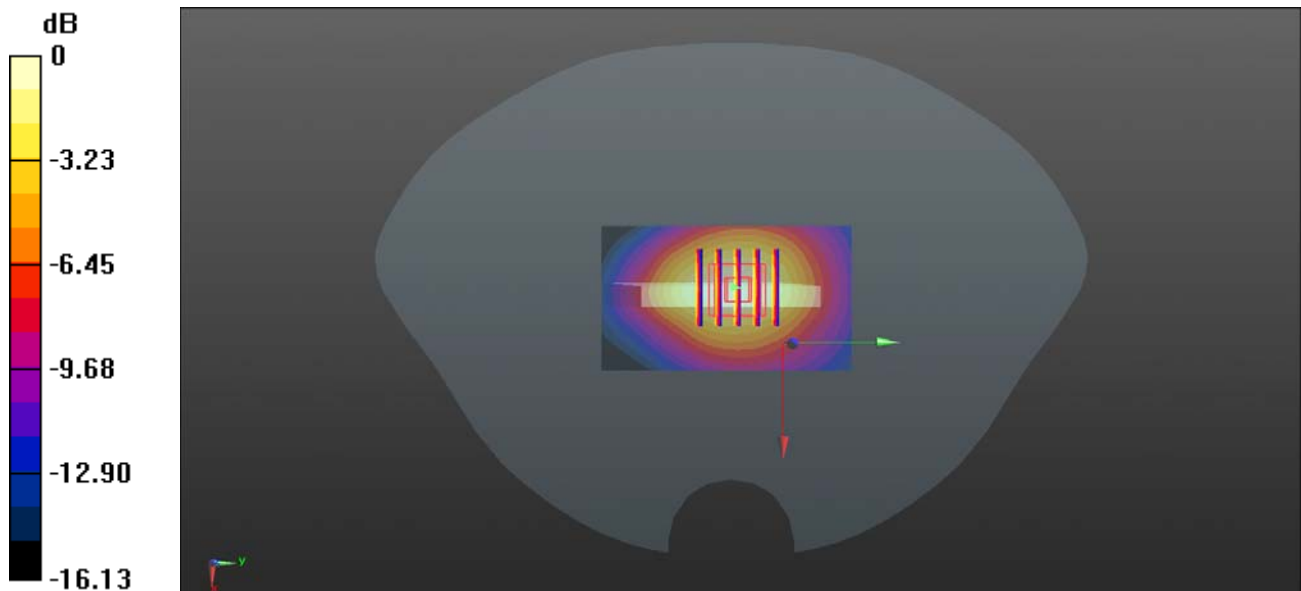
Ch 18900/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.09 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.942 W/kg

SAR(1 g) = 0.582 W/kg; SAR(10 g) = 0.344 W/kg

Maximum value of SAR (measured) = 0.635 W/kg



0 dB = 0.635 W/kg

MEAS.13 Right Head with Cheek on High Channel in LTE Band 4 mode with Up Antenna 50RB

Date: 2020.03.24

Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1745$ MHz; $\sigma = 1.357$ S/m; $\epsilon_r = 40.506$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature:22.6 Liquid Temperature:21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.67, 8.67, 8.67); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 20300/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.846 W/kg

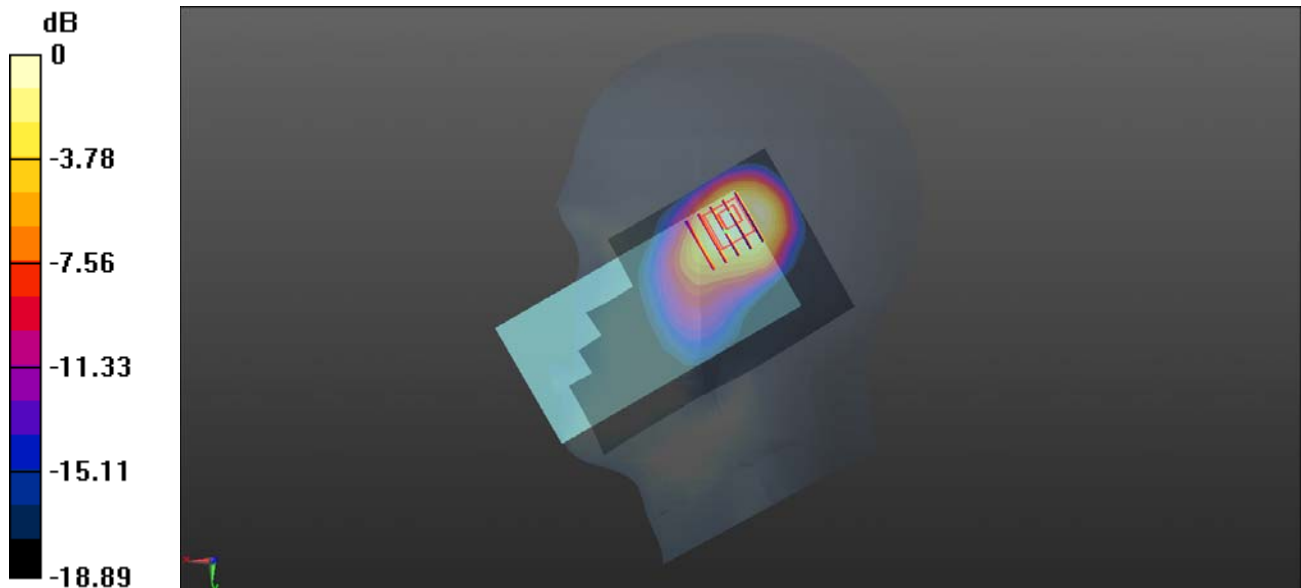
Ch 20300/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.91 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 1.67 W/kg

SAR(1 g) = 0.822 W/kg; SAR(10 g) = 0.446 W/kg

Maximum value of SAR (measured) = 0.955 W/kg



0 dB = 0.955 W/kg

MEAS.14 Body Plane with Bottom Edge 10mm on Middle Channel in LTE Band 4 mode with Down Antenna 1RB

Date: 2020.03.24

Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.355$ S/m; $\epsilon_r = 40.56$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.6 Liquid Temperature: 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.67, 8.67, 8.67); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 20175/Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.631 W/kg

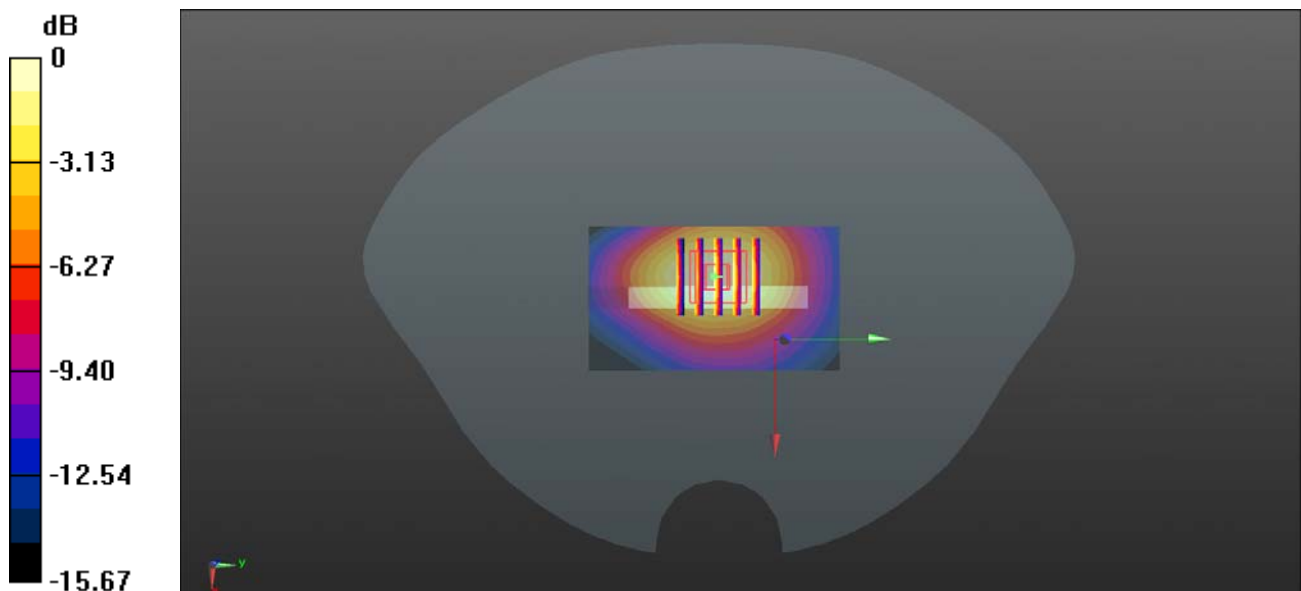
Ch 20175/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.88 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.869 W/kg

SAR(1 g) = 0.559 W/kg; SAR(10 g) = 0.338 W/kg

Maximum value of SAR (measured) = 0.612 W/kg



0 dB = 0.612 W/kg

MEAS.15 Right Head with Cheek on Middle Channel in LTE Band 5 mode with Up Antenna 25RB

Date: 2020.04.10

Communication System Band: Band 5, E-UTRA/FDD (824.0 - 849.0 MHz); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.903$ S/m; $\epsilon_r = 41.707$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature:22.5 Liquid Temperature:21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 20525/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.579 W/kg

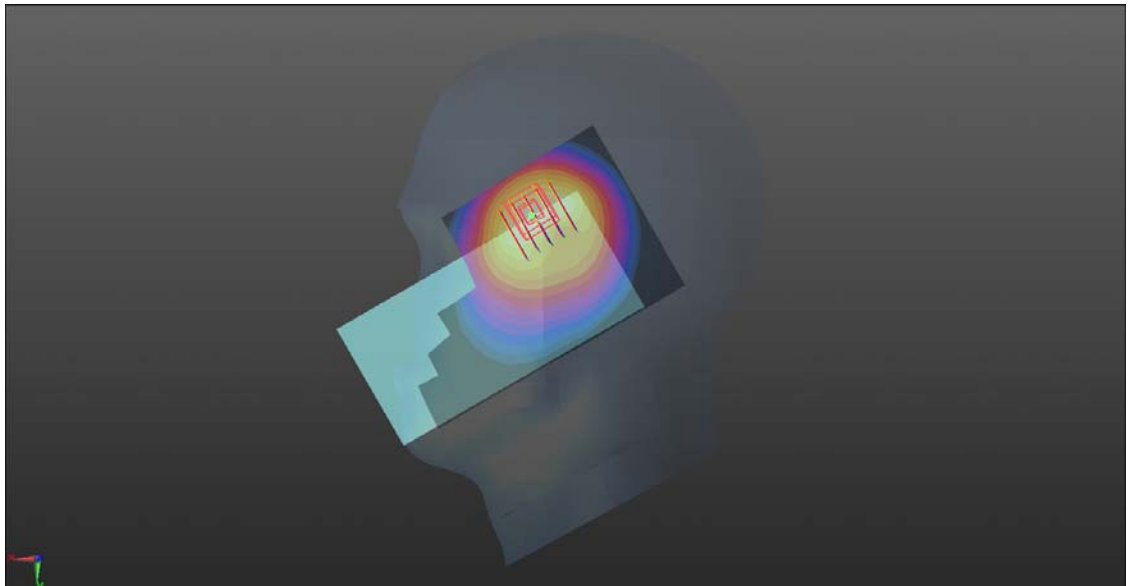
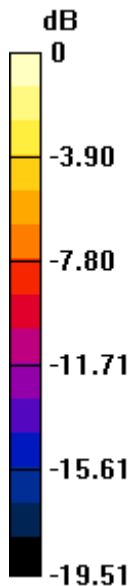
Ch 20525/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.65 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.533 W/kg; SAR(10 g) = 0.268 W/kg

Maximum value of SAR (measured) = 0.622 W/kg



0 dB = 0.622 W/kg

MEAS.16 Body Plane with Bottom Edge 10mm on High Channel in LTE Band 5 mode with Up Antenna 1RB

Date: 2020.04.10

Communication System Band: Band 5, E-UTRA/FDD (824.0 - 849.0 MHz); Frequency: 844 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 844$ MHz; $\sigma = 0.929$ S/m; $\epsilon_r = 40.806$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.5 Liquid Temperature:21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 20600/Area Scan (51x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.461 W/kg

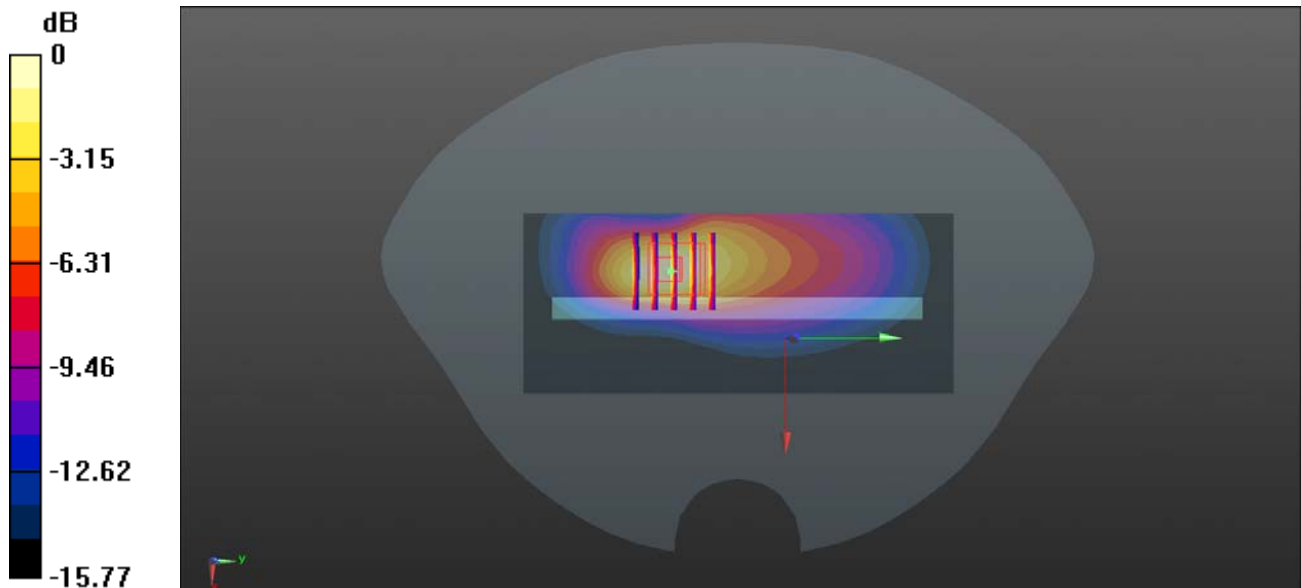
Ch 20600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.47 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.746 W/kg

SAR(1 g) = 0.411 W/kg; SAR(10 g) = 0.219 W/kg

Maximum value of SAR (measured) = 0.461 W/kg



0 dB = 0.461 W/kg

MEAS.17 Right Head with Cheek on Middle Channel in LTE Band 7 mode with Up Antenna 1RB

Date: 2020.04.07

Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2535 \text{ MHz}$; $\sigma = 1.932 \text{ S/m}$; $\epsilon_r = 39.51$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Ambient Temperature:22.6 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.81, 7.81, 7.81); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch21100/Area Scan (91x151x1): Interpolated grid: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$

Maximum value of SAR (interpolated) = 0.783 W/kg

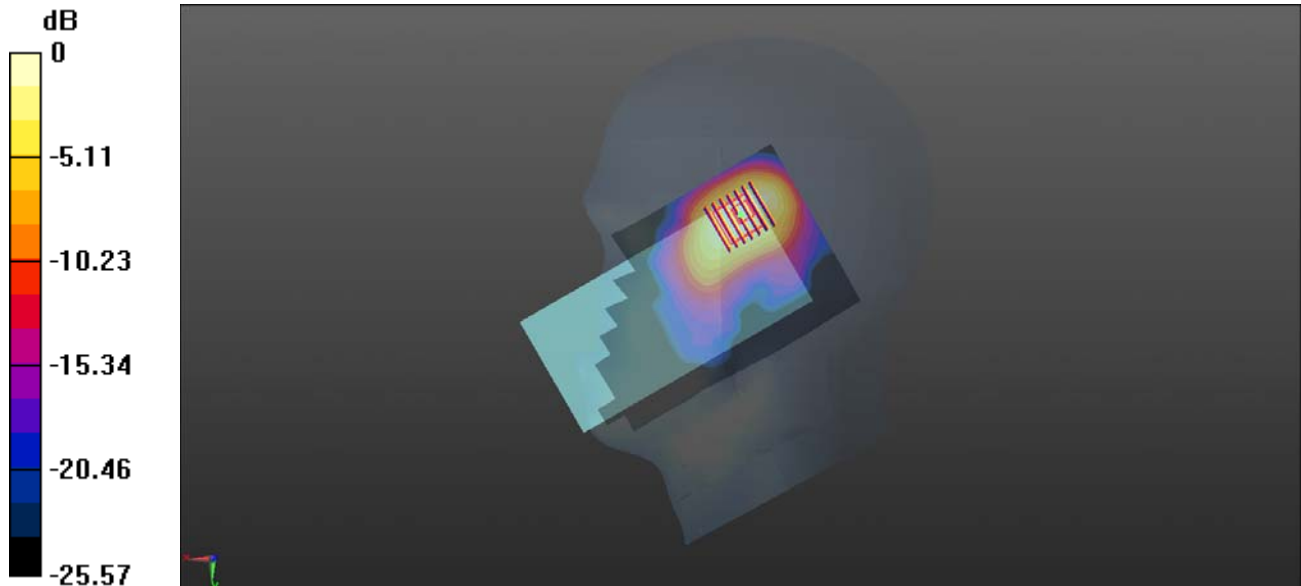
Ch21100/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 6.720 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.73 W/kg

SAR(1 g) = 0.711 W/kg; SAR(10 g) = 0.330 W/kg

Maximum value of SAR (measured) = 0.791 W/kg



0 dB = 0.791 W/kg

MEAS.18 Body Plane with Back Side 10mm on Middle Channel in LTE Band 7 mode with Up Antenna 1RB

Date: 2020.04.07

Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2535$ MHz; $\sigma = 1.932$ S/m; $\epsilon_r = 39.51$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.6 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.81, 7.81, 7.81); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch21100/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.808 W/kg

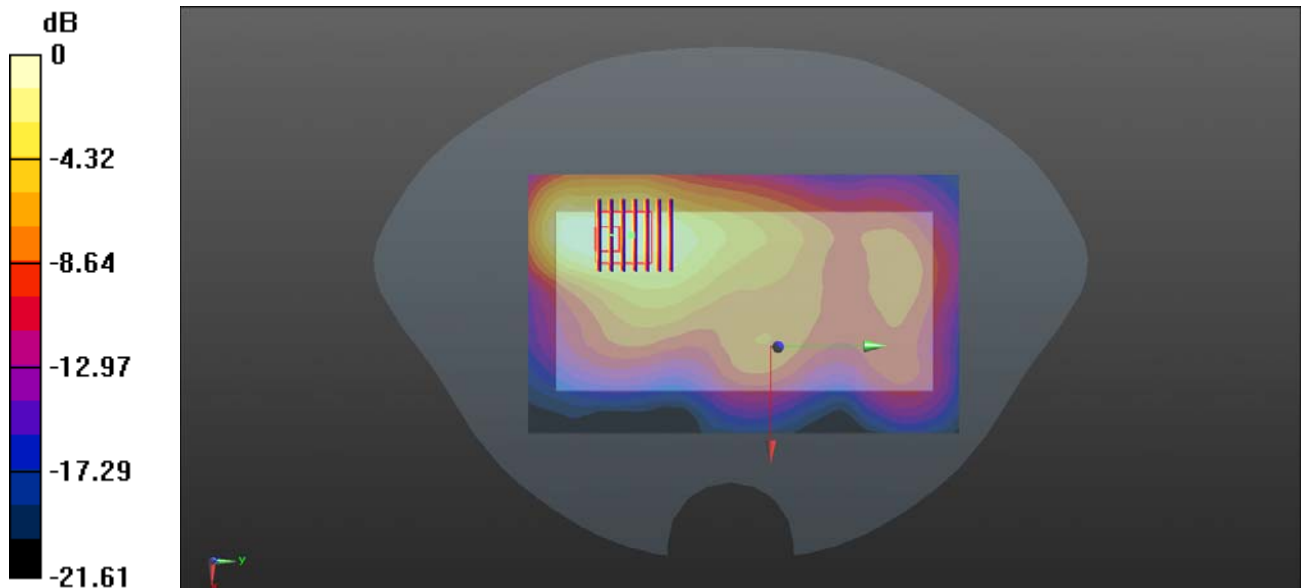
Ch21100/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.635 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.67 W/kg

SAR(1 g) = 0.761 W/kg; SAR(10 g) = 0.383 W/kg

Maximum value of SAR (measured) = 0.829 W/kg



0 dB = 0.829 W/kg

MEAS.19 Right Head with Cheek on High Channel in LTE Band 26 mode with Up Antenna 36RB

Date: 2020.04.11

Communication System Band: Band 26; Frequency: 841.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 841.5 \text{ MHz}$; $\sigma = 0.925 \text{ S/m}$; $\epsilon_r = 41.284$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Ambient Temperature: 22.4 Liquid Temperature: 21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 26965/Area Scan (71x121x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.743 W/kg

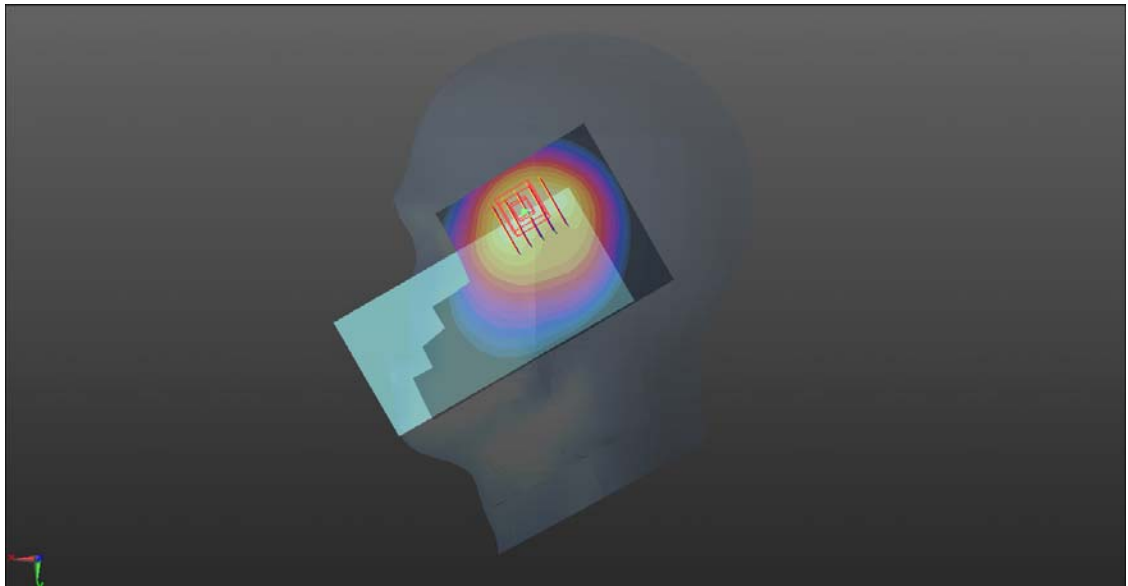
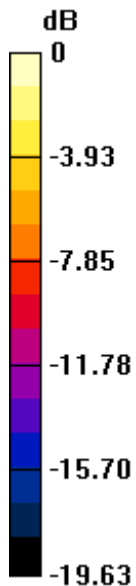
Ch 26965/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.41 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 0.684 W/kg; SAR(10 g) = 0.341 W/kg

Maximum value of SAR (measured) = 0.790 W/kg



0 dB = 0.790 W/kg

MEAS.20 Body Plane with Back Side 10mm on High Channel in LTE Band 26 mode with Up Antenna 1RB

Date: 2020.04.11

Communication System Band: Band 26; Frequency: 841.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 841.5$ MHz; $\sigma = 0.925$ S/m; $\epsilon_r = 41.284$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 26965/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.433 W/kg

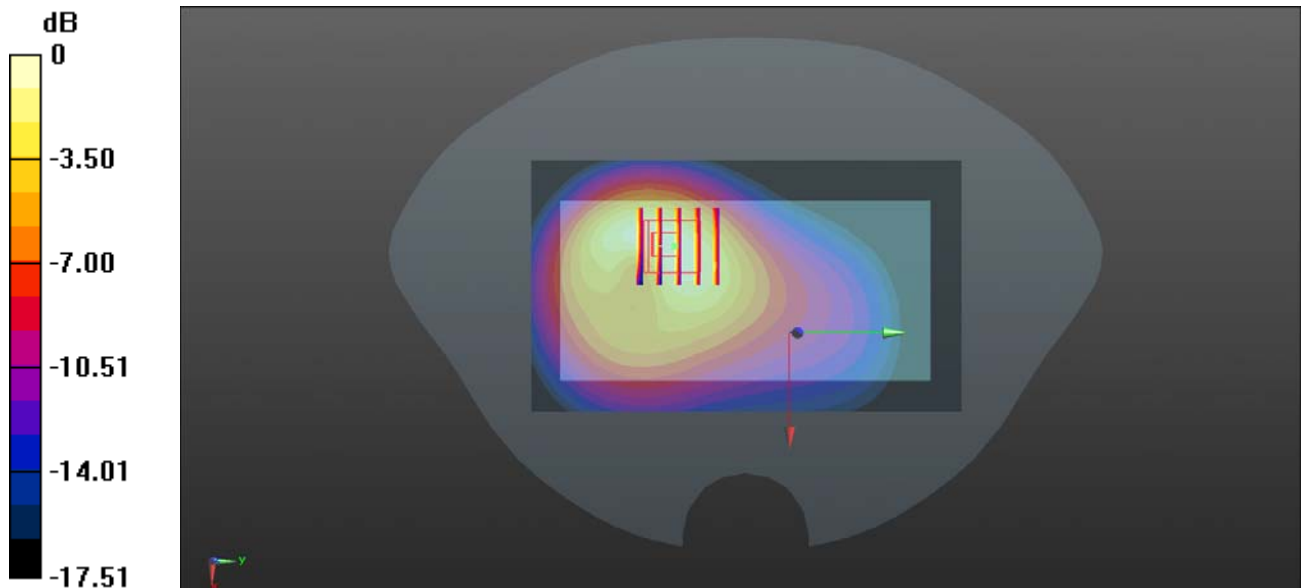
Ch 26965/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.69 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.738 W/kg

SAR(1 g) = 0.417 W/kg; SAR(10 g) = 0.238 W/kg

Maximum value of SAR (measured) = 0.456 W/kg



0 dB = 0.456 W/kg

MEAS.21 Right Head with Cheek on Middle Channel in LTE Band 38 mode with Up Antenna 100RB

Date: 2020.04.08

Communication System Band: Band 38, E-UTRA/TDD (2570.0 - 2620.0 MHz); Frequency: 2595 MHz; Duty Cycle: 1:1.58

Medium parameters used: $f = 2595 \text{ MHz}$; $\sigma = 1.983 \text{ S/m}$; $\epsilon_r = 38.723$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Ambient Temperature: 22.6 Liquid Temperature: 21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.61, 7.61, 7.61); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch38000/Area Scan (91x151x1): Interpolated grid: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$

Maximum value of SAR (interpolated) = 0.884 W/kg

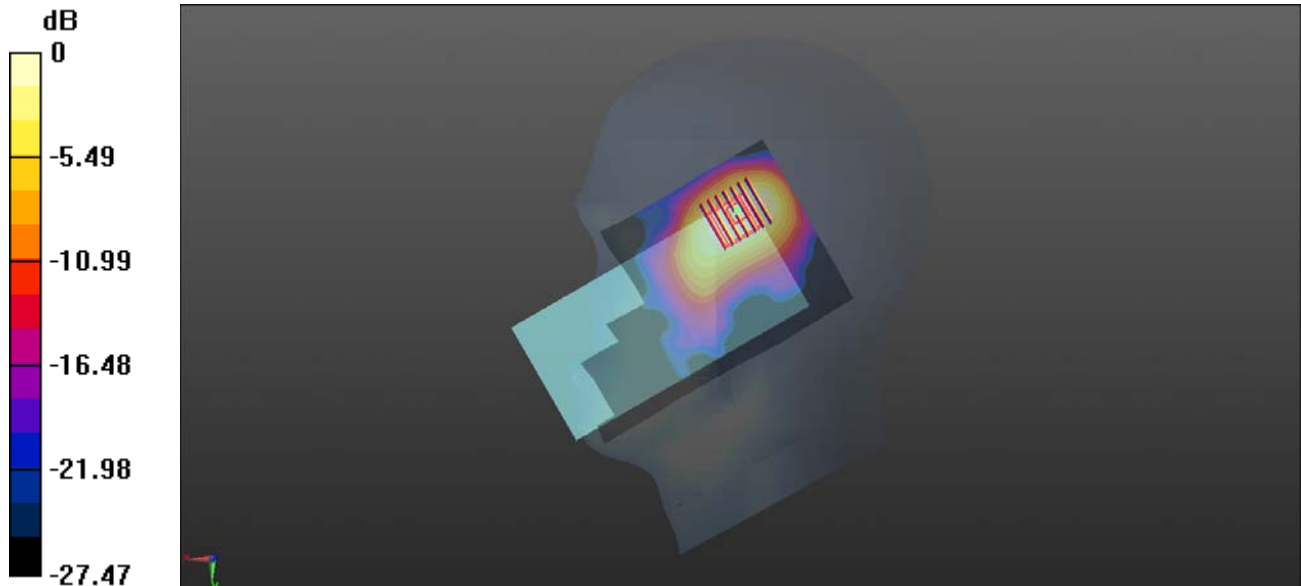
Ch38000/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 6.396 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 2.02 W/kg

SAR(1 g) = 0.794 W/kg; SAR(10 g) = 0.366 W/kg

Maximum value of SAR (measured) = 0.883 W/kg



0 dB = 0.883 W/kg

MEAS.22 Body Plane with Top Edge 10mm on High Channel in LTE Band 38 mode with Up Antenna 1RB

Date: 2020.04.08

Communication System Band: Band 38, E-UTRA/TDD (2570.0 - 2620.0 MHz); Frequency: 2610 MHz; Duty Cycle: 1:1.58

Medium parameters used: $f = 2610$ MHz; $\sigma = 2.013$ S/m; $\epsilon_r = 37.998$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.6 Liquid Temperature:21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.61, 7.61, 7.61); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch38150/Area Scan (51x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.482 W/kg

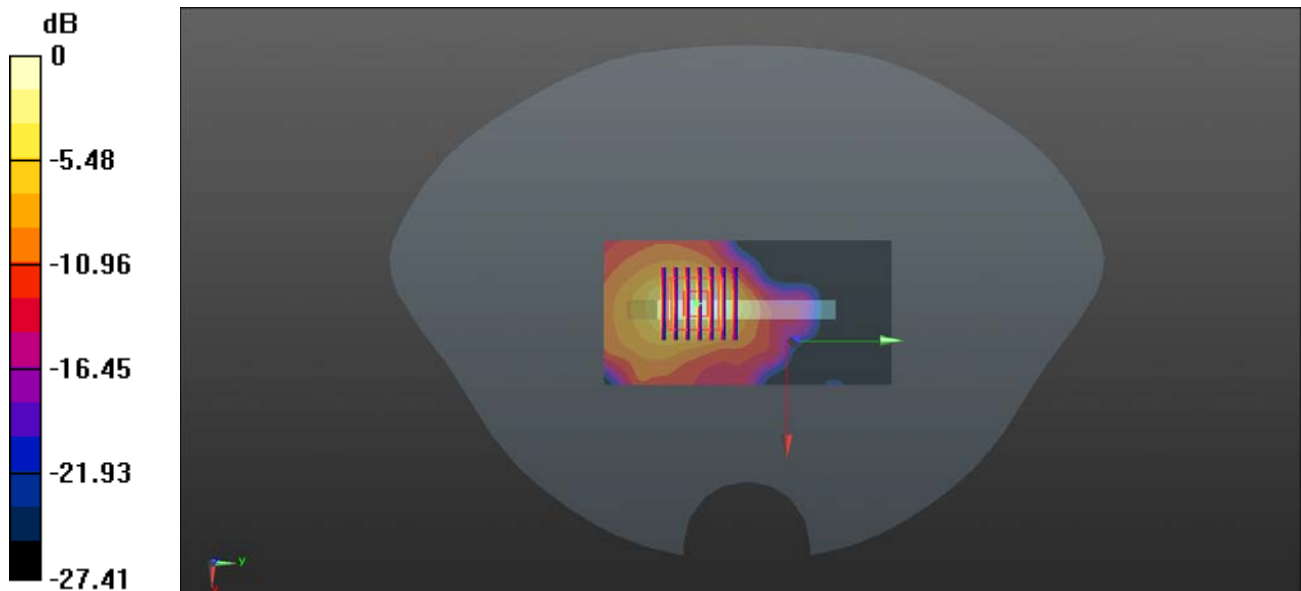
Ch38150/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.847 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.963 W/kg

SAR(1 g) = 0.420 W/kg; SAR(10 g) = 0.165 W/kg

Maximum value of SAR (measured) = 0.500 W/kg



0 dB = 0.500 W/kg

MEAS.23 Right Head with Cheek on Middle Channel in LTE Band 41 mode with Up Antenna 1RB

Date: 2020.04.09

Communication System Band: Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz); Frequency: 2593 MHz; Duty Cycle: 1:1.58

Medium parameters used: $f = 2593$ MHz; $\sigma = 1.966$ S/m; $\epsilon_r = 39.717$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature:22.5 Liquid Temperature:21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.61, 7.61, 7.61); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch40620/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.944 W/kg

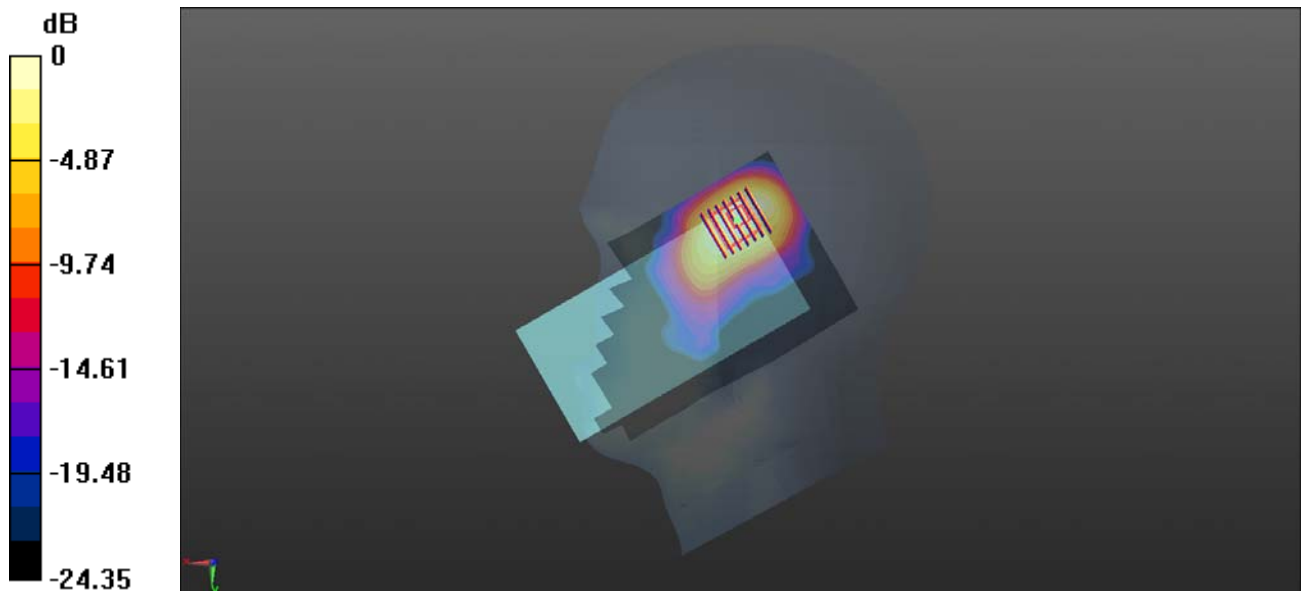
Ch40620/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.877 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 2.13 W/kg

SAR(1 g) = 0.837 W/kg; SAR(10 g) = 0.380 W/kg

Maximum value of SAR (measured) = 0.925 W/kg



0 dB = 0.925 W/kg

MEAS.24 Body Plane with Top Edge 10mm on Channel 41055 in LTE Band 41 mode with Up Antenna 1RB

Date: 2020.04.09

Communication System Band: Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz); Frequency: 2636.5 MHz; Duty Cycle: 1:1.58

Medium parameters used: $f = 2636.5$ MHz; $\sigma = 2.04$ S/m; $\epsilon_r = 39.148$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature:22.5 Liquid Temperature:21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.61, 7.61, 7.61); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch41055/Area Scan (51x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.677 W/kg

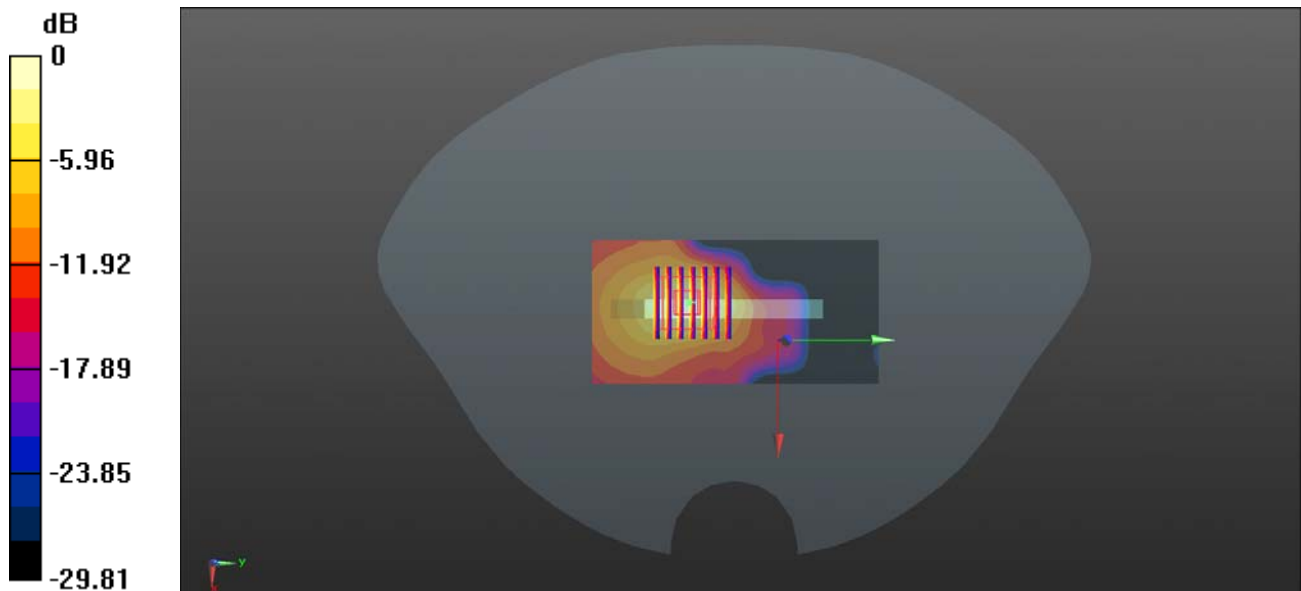
Ch41055/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.278 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.36 W/kg

SAR(1 g) = 0.578 W/kg; SAR(10 g) = 0.228 W/kg

Maximum value of SAR (measured) = 0.678 W/kg



0 dB = 0.678 W/kg

MEAS.25 Left Head with Cheek on Low Channel in IEEE802.11b mode

Date: 2020.04.06

Communication System Band: WLAN(b); Frequency: 2412 MHz; Duty Cycle: 1:1.01

Medium parameters used (interpolated): $f = 2412 \text{ MHz}$; $\sigma = 1.774 \text{ S/m}$; $\epsilon_r = 39.745$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Ambient Temperature:22.5 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.81, 7.81, 7.81); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch1/Area Scan (91x151x1): Interpolated grid: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$

Maximum value of SAR (interpolated) = 0.735 W/kg

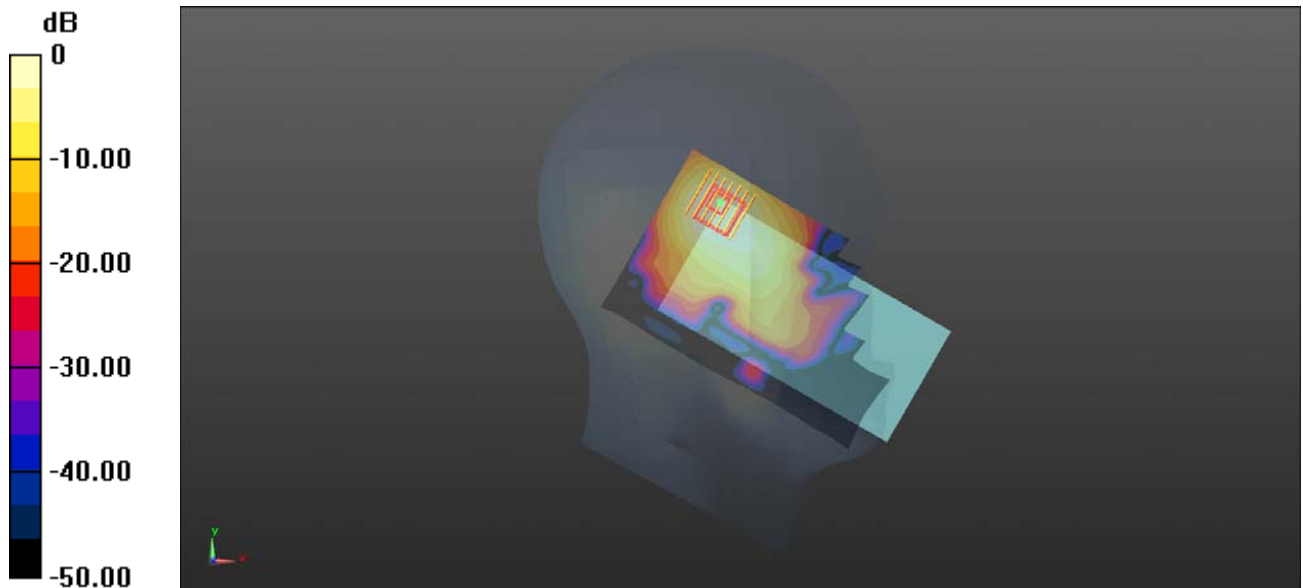
Ch1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 6.188 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.57 W/kg

SAR(1 g) = 0.616 W/kg; SAR(10 g) = 0.296 W/kg

Maximum value of SAR (measured) = 0.676 W/kg



0 dB = 0.676 W/kg

MEAS.26 Body Plane with Left Edge 10mm on High Channel in IEEE802.11b mode

Date: 2020.04.06

Communication System Band: WLAN(b); Frequency: 2462 MHz; Duty Cycle: 1:1.01

Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.849$ S/m; $\epsilon_r = 38.968$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.5 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.81, 7.81, 7.81); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch11/Area Scan (61x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.201 W/kg

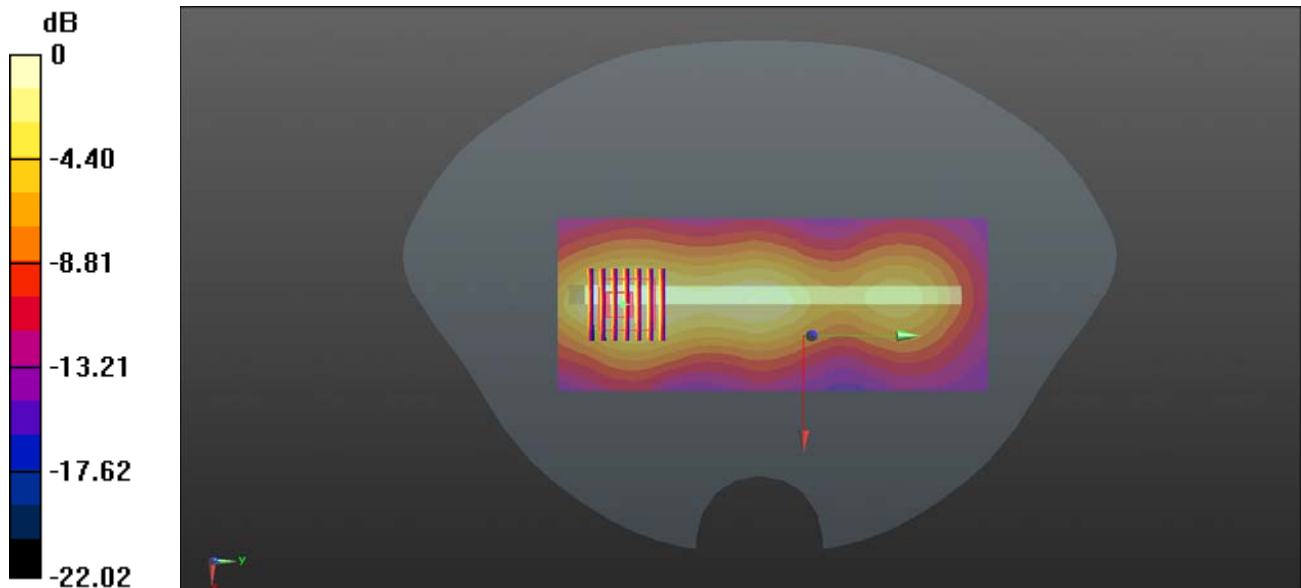
Ch11/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.585 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.384 W/kg

SAR(1 g) = 0.176 W/kg; SAR(10 g) = 0.086 W/kg

Maximum value of SAR (measured) = 0.194 W/kg



0 dB = 0.194 W/kg

MEAS.27 Left Head with Cheek on Channel 64 in IEEE802.11a mode

Date: 2020.04.01

Communication System Band: WLAN(a); Frequency: 5320 MHz; Duty Cycle: 1:1.019

Medium parameters used: $f = 5320 \text{ MHz}$; $\sigma = 4.837 \text{ S/m}$; $\epsilon_r = 35.637$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Ambient Temperature:22.6 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.51, 5.51, 5.51); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch64/Area Scan (101x181x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.807 W/kg

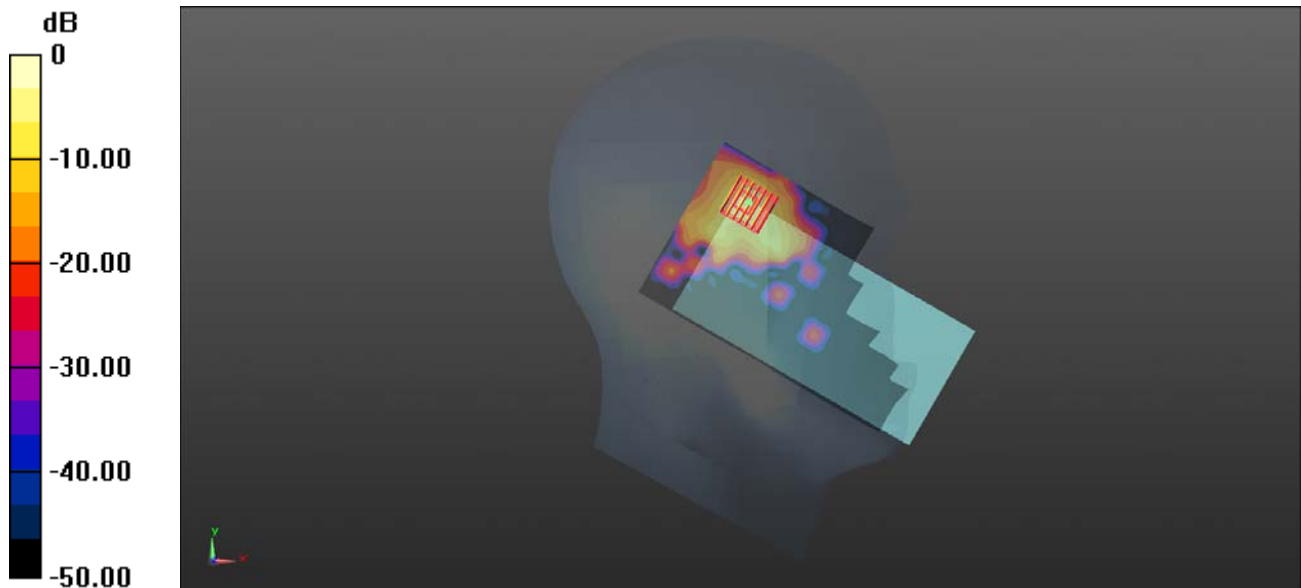
Ch64/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 3.570 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 3.03 W/kg

SAR(1 g) = 0.674 W/kg; SAR(10 g) = 0.193 W/kg

Maximum value of SAR (measured) = 1.44 W/kg



0 dB = 1.44 W/kg

MEAS.28 Left Head with Cheek on Channel 100 in IEEE802.11a mode

Date: 2020.04.02

Communication System Band: WLAN(a); Frequency: 5500 MHz; Duty Cycle: 1:1.019

Medium parameters used: $f = 5500$ MHz; $\sigma = 4.82$ S/m; $\epsilon_r = 35.15$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Ambient Temperature:22.6 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.8, 4.8, 4.8); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch100/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.873 W/kg

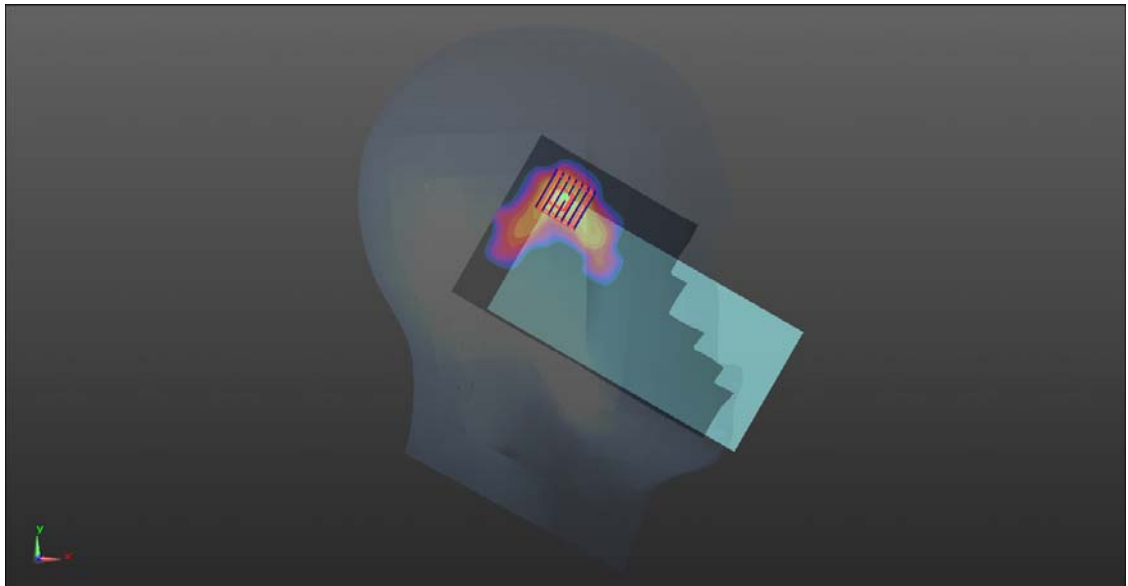
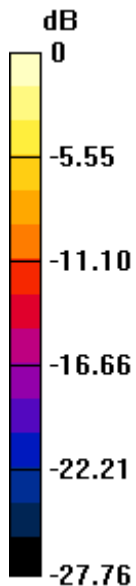
Ch100/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.454 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 3.32 W/kg

SAR(1 g) = 0.710 W/kg; SAR(10 g) = 0.199 W/kg

Maximum value of SAR (measured) = 1.56 W/kg



0 dB = 1.56 W/kg

MEAS.29 Left Head with Cheek on Channel 155 in IEEE802.11ac(VHT80) mode

Date: 2020.04.03

Communication System Band: WLAN(ac) 80Mhz; Frequency: 5775 MHz;Duty Cycle: 1:1.072

Medium parameters used (interpolated): $f = 5775$ MHz; $\sigma = 5.387$ S/m; $\epsilon_r = 34.266$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Ambient Temperature:22.5 Liquid Temperature:21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.06, 5.06, 5.06); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch155/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.848 W/kg

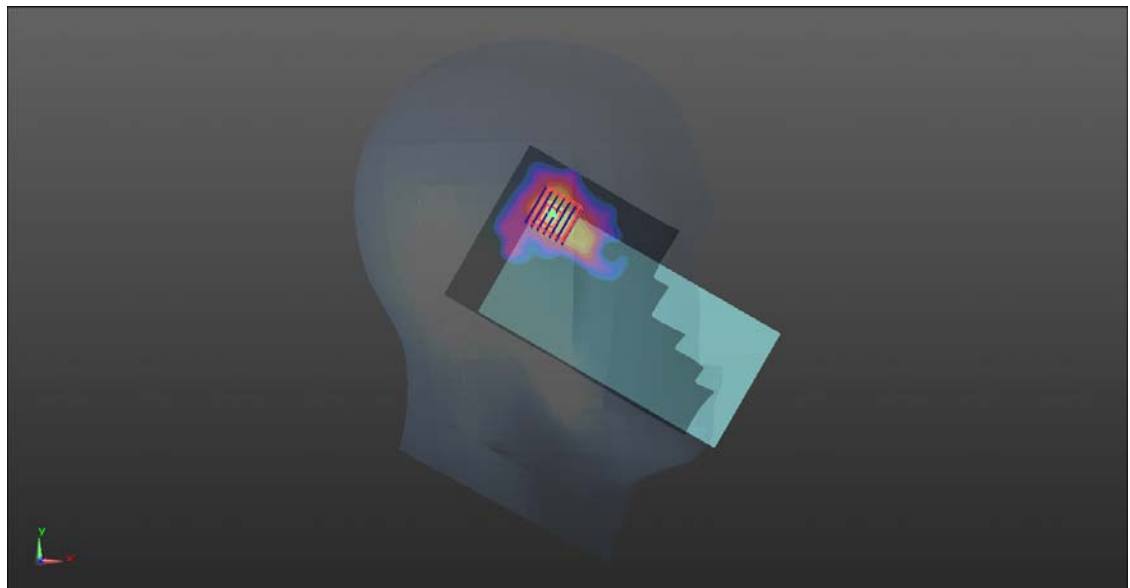
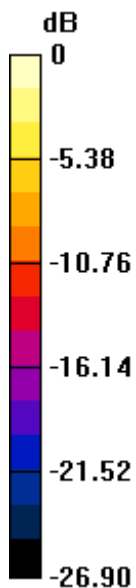
Ch155/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.926 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 3.87 W/kg

SAR(1 g) = 0.669 W/kg; SAR(10 g) = 0.197 W/kg

Maximum value of SAR (measured) = 1.57 W/kg



0 dB = 1.57 W/kg

MEAS.30 Body Plane with Back Side 10mm on Channel 64 in IEEE802.11a mode

Date: 2020.04.01

Communication System Band: WLAN(a); Frequency: 5320 MHz; Duty Cycle: 1:1.019

Medium parameters used: $f = 5320$ MHz; $\sigma = 4.837$ S/m; $\epsilon_r = 35.637$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.6 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.51, 5.51, 5.51); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch64/Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.281 W/kg

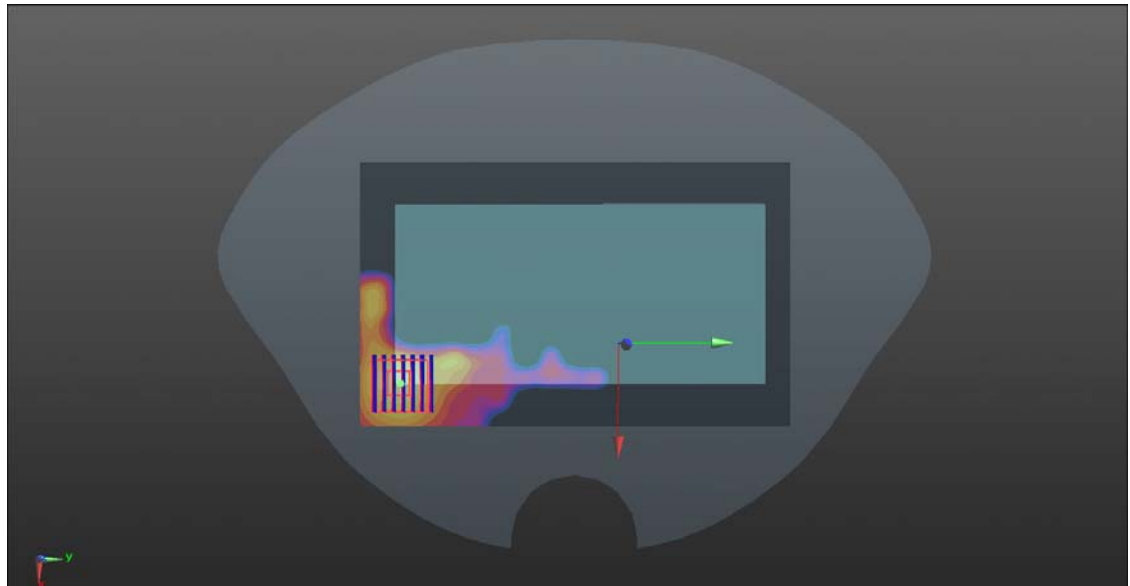
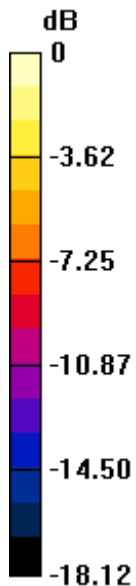
Ch64/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.896 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.491 W/kg

SAR(1 g) = 0.140 W/kg; SAR(10 g) = 0.043 W/kg

Maximum value of SAR (measured) = 0.285 W/kg



0 dB = 0.285 W/kg

MEAS.31 Body Plane with Back Side 10mm on Channel 100 in IEEE802.11a mode

Date: 2020.04.02

Communication System Band: WLAN(a); Frequency: 5500 MHz; Duty Cycle: 1:1.019

Medium parameters used: $f = 5500 \text{ MHz}$; $\sigma = 4.82 \text{ S/m}$; $\epsilon_r = 35.15$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient Temperature: 22.6 Liquid Temperature: 21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.8, 4.8, 4.8); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch100/Area Scan (111x181x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.586 W/kg

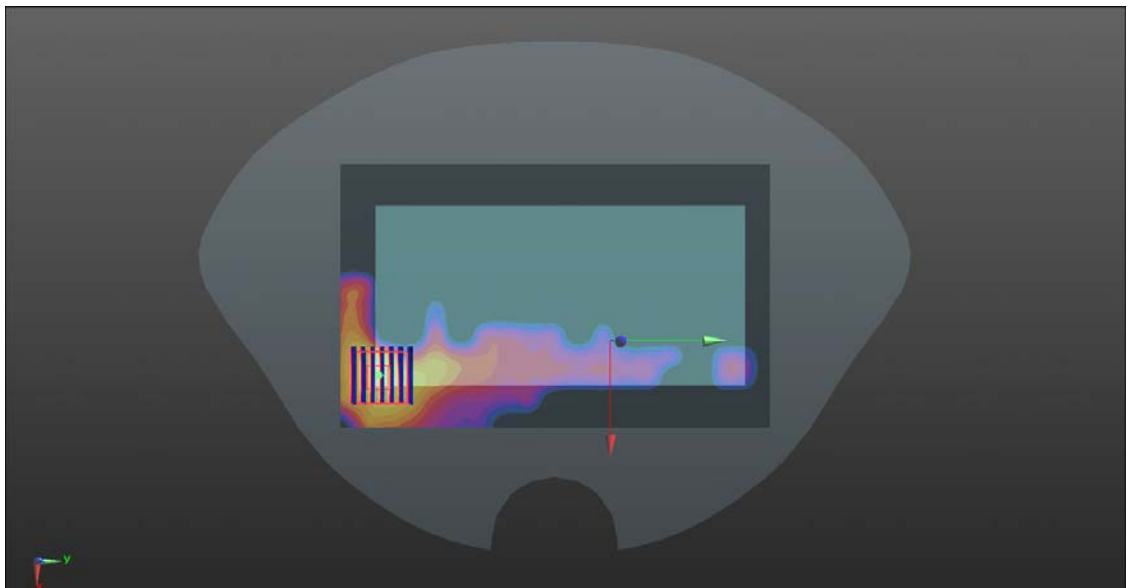
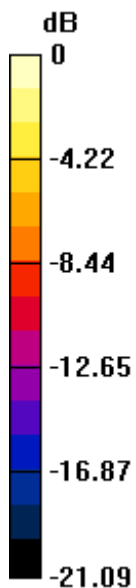
Ch100/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 1.402 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.313 W/kg; SAR(10 g) = 0.099 W/kg

Maximum value of SAR (measured) = 0.628 W/kg



0 dB = 0.628 W/kg

MEAS.32 Body Plane with Back Side 10mm on Channel 155 in IEEE802.11a mode

Date: 2020.04.03

Communication System Band: WLAN(ac) 80Mhz; Frequency: 5775 MHz;Duty Cycle: 1:1.072

Medium parameters used (interpolated): $f = 5775$ MHz; $\sigma = 5.387$ S/m; $\epsilon_r = 34.266$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.5 Liquid Temperature:21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.06, 5.06, 5.06); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch155 17/Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.260 W/kg

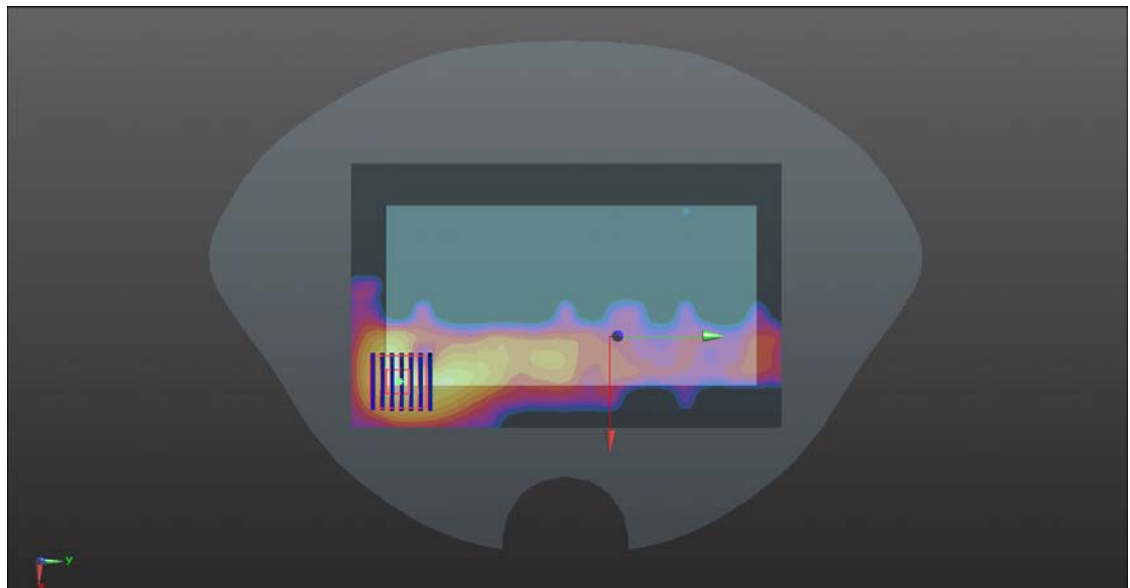
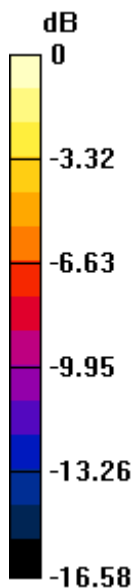
Ch155 17/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.9020 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.531 W/kg

SAR(1 g) = 0.121 W/kg; SAR(10 g) = 0.040 W/kg

Maximum value of SAR (measured) = 0.251 W/kg



0 dB = 0.251 W/kg

MEAS.33 Body Plane with Left Edge 10mm on Channel 36 in IEEE802.11a mode

Date: 2020.04.01

Communication System Band: WLAN(a); Frequency: 5180 MHz; Duty Cycle: 1:1.019

Medium parameters used: $f = 5180$ MHz; $\sigma = 4.626$ S/m; $\epsilon_r = 36.523$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.6 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.51, 5.51, 5.51); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch36/Area Scan (71x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.649 W/kg

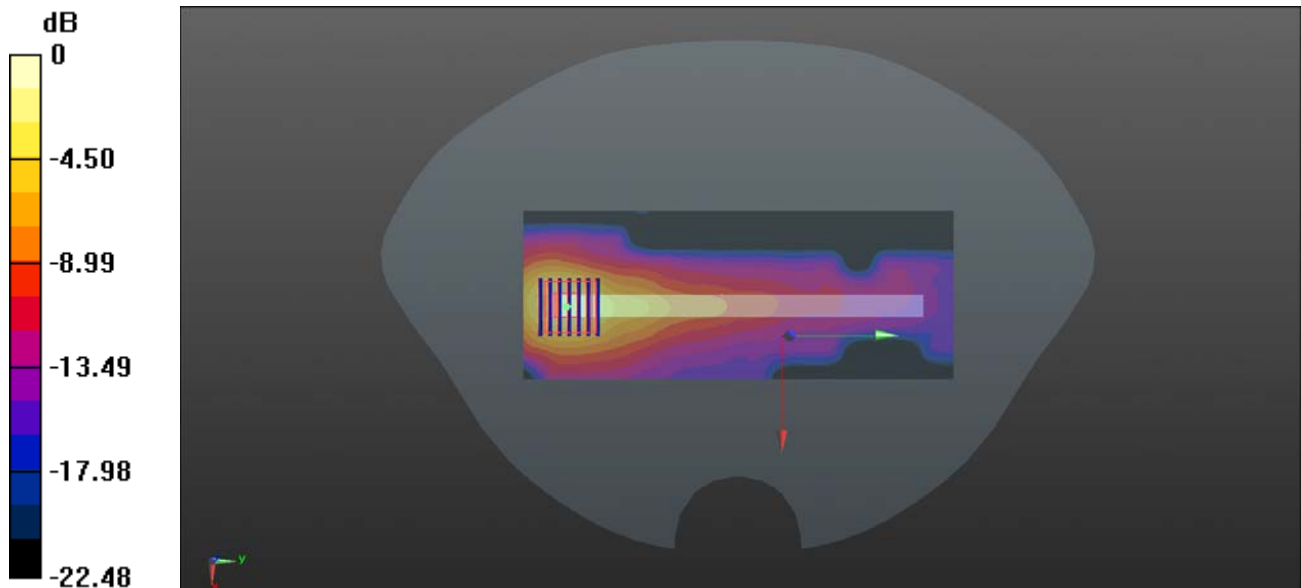
Ch36/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.715 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 1.24 W/kg

SAR(1 g) = 0.331 W/kg; SAR(10 g) = 0.115 W/kg

Maximum value of SAR (measured) = 0.647 W/kg



0 dB = 0.647 W/kg

MEAS.34 Body Plane with Left Edge 10mm on Channel 155 in IEEE802.11ac(VHT80) mode

Date: 2020.04.03

Communication System Band: WLAN(ac) 80Mhz; Frequency: 5775 MHz;Duty Cycle: 1:1.072

Medium parameters used (interpolated): $f = 5775$ MHz; $\sigma = 5.387$ S/m; $\epsilon_r = 34.266$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.5 Liquid Temperature:21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.06, 5.06, 5.06); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch155/Area Scan (71x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.422 W/kg

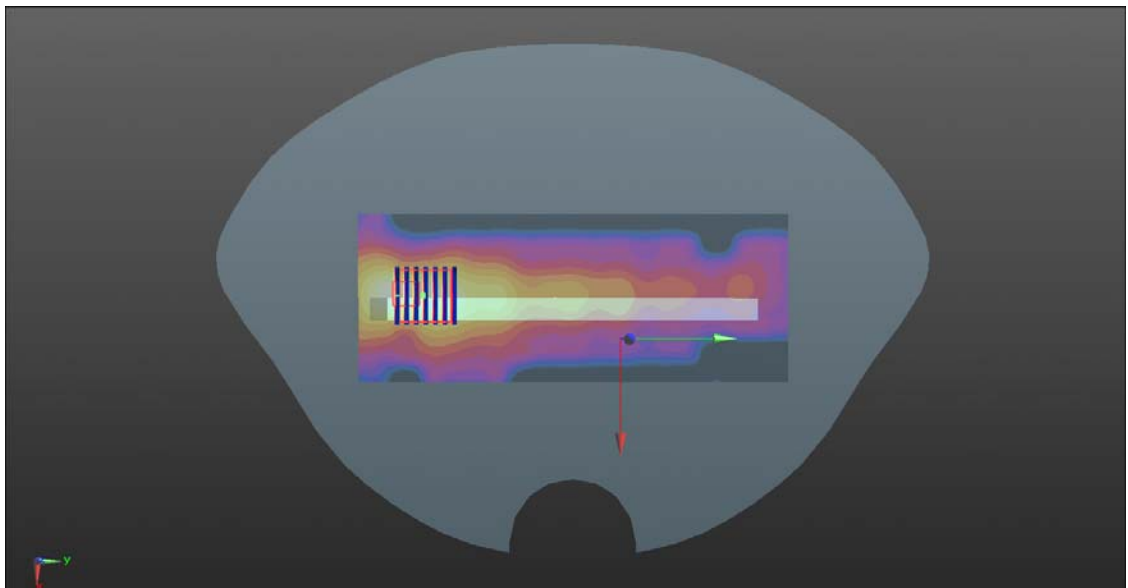
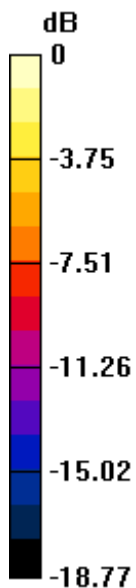
Ch155/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.412 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.900 W/kg

SAR(1 g) = 0.210 W/kg; SAR(10 g) = 0.078 W/kg

Maximum value of SAR (measured) = 0.454 W/kg



0 dB = 0.454 W/kg

MEAS.35 Body Plane with Left Edge 0mm on Channel 64 in IEEE802.11a mode

Date: 2020.04.01

Communication System Band: WLAN(a); Frequency: 5320 MHz; Duty Cycle: 1:1.019

Medium parameters used: $f = 5320$ MHz; $\sigma = 4.837$ S/m; $\epsilon_r = 35.637$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.6 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.51, 5.51, 5.51); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch64/Area Scan (71x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 5.98 W/kg

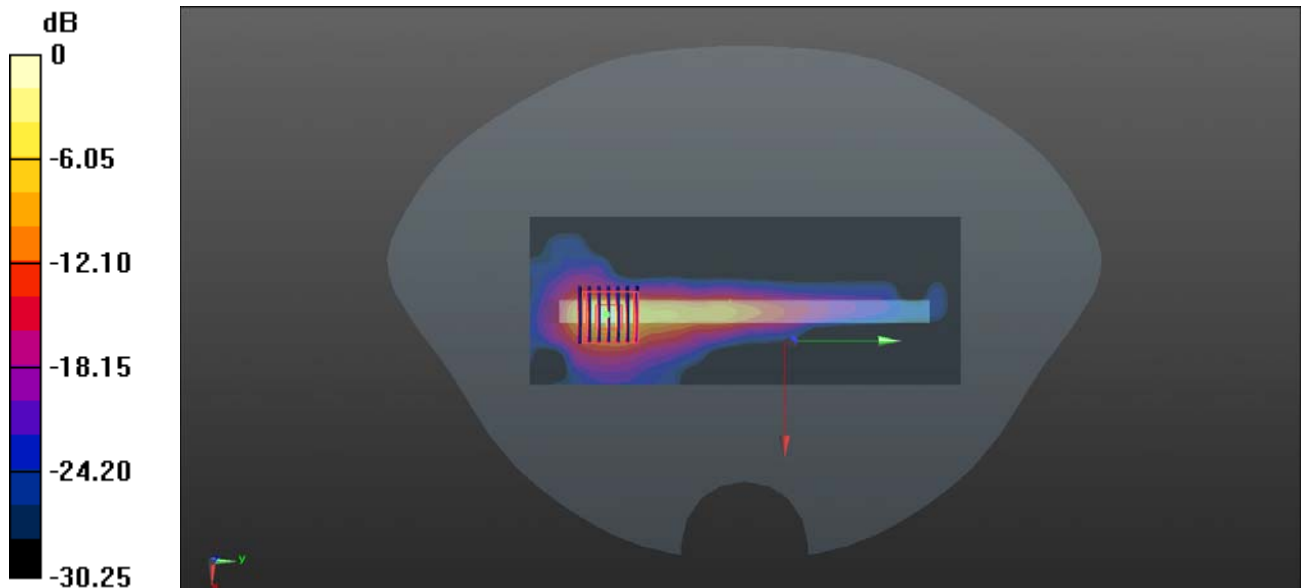
Ch64/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 6.127 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 16.6 W/kg

SAR(1 g) = 2.64 W/kg; SAR(10 g) = 0.584 W/kg

Maximum value of SAR (measured) = 7.01 W/kg



0 dB = 7.01 W/kg

MEAS.36 Body Plane with Left Edge 0mm on Channel 100 in IEEE802.11a mode

Date: 2020.04.02

Communication System Band: WLAN(a); Frequency: 5500 MHz; Duty Cycle: 1:1.019

Medium parameters used: $f = 5500$ MHz; $\sigma = 4.82$ S/m; $\epsilon_r = 35.15$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.6 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.8, 4.8, 4.8); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch100/Area Scan (71x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 6.03 W/kg

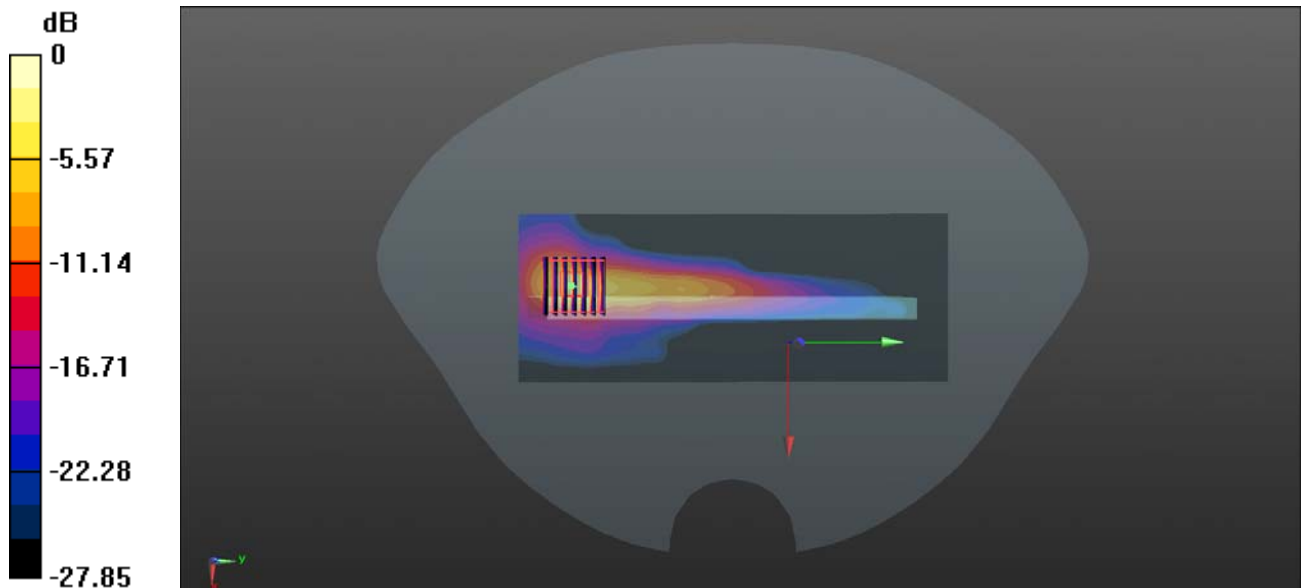
Ch100/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 8.126 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 16.1 W/kg

SAR(1 g) = 2.6 W/kg; SAR(10 g) = 0.606 W/kg

Maximum value of SAR (measured) = 6.48 W/kg



0 dB = 6.48 W/kg

MEAS.37 Left Head with Cheek on High Channel in Bluetooth DH5 mode

Date: 2020.04.06

Communication System Band: BT; Frequency: 2480 MHz; Duty Cycle: 1:1.302

Medium parameters used: $f = 2480$ MHz; $\sigma = 1.875$ S/m; $\epsilon_r = 38.73$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Ambient Temperature:22.5 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.81, 7.81, 7.81); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch78/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.154 W/kg

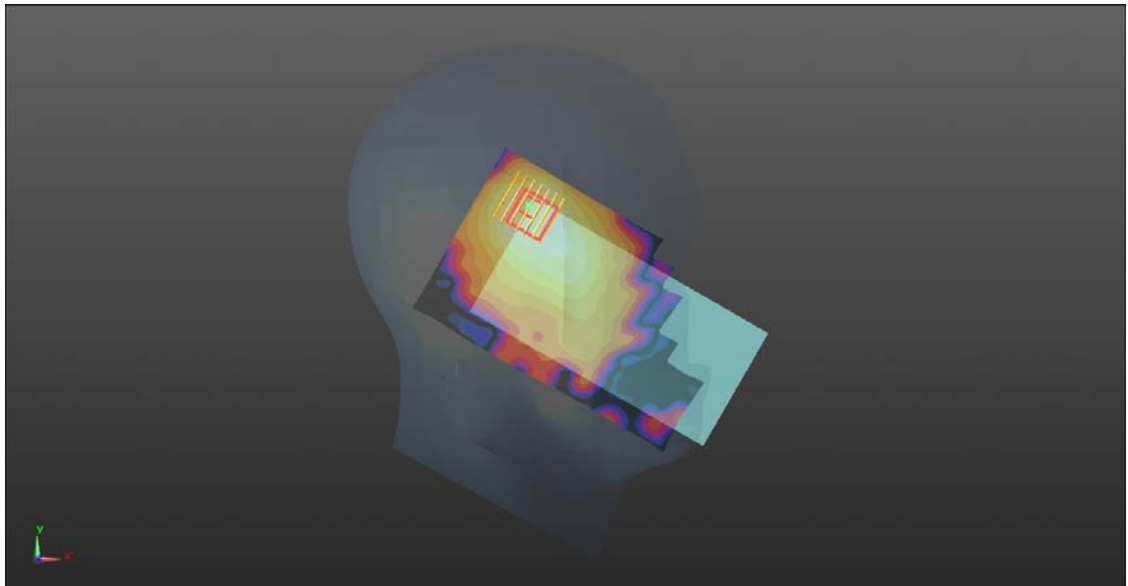
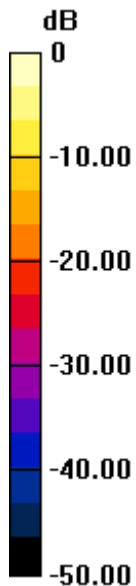
Ch78/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.044 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.350 W/kg

SAR(1 g) = 0.132 W/kg; SAR(10 g) = 0.063 W/kg

Maximum value of SAR (measured) = 0.143 W/kg



0 dB = 0.143 W/kg

MEAS.38 Body Plane with Left Edge 10mm on High Channel in Bluetooth DH5 mode

Date: 2020.04.06

Communication System Band: BT; Frequency: 2480 MHz; Duty Cycle: 1:1.302

Medium parameters used: $f = 2480$ MHz; $\sigma = 1.875$ S/m; $\epsilon_r = 38.73$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.5 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.81, 7.81, 7.81); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch78/Area Scan (61x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0470 W/kg

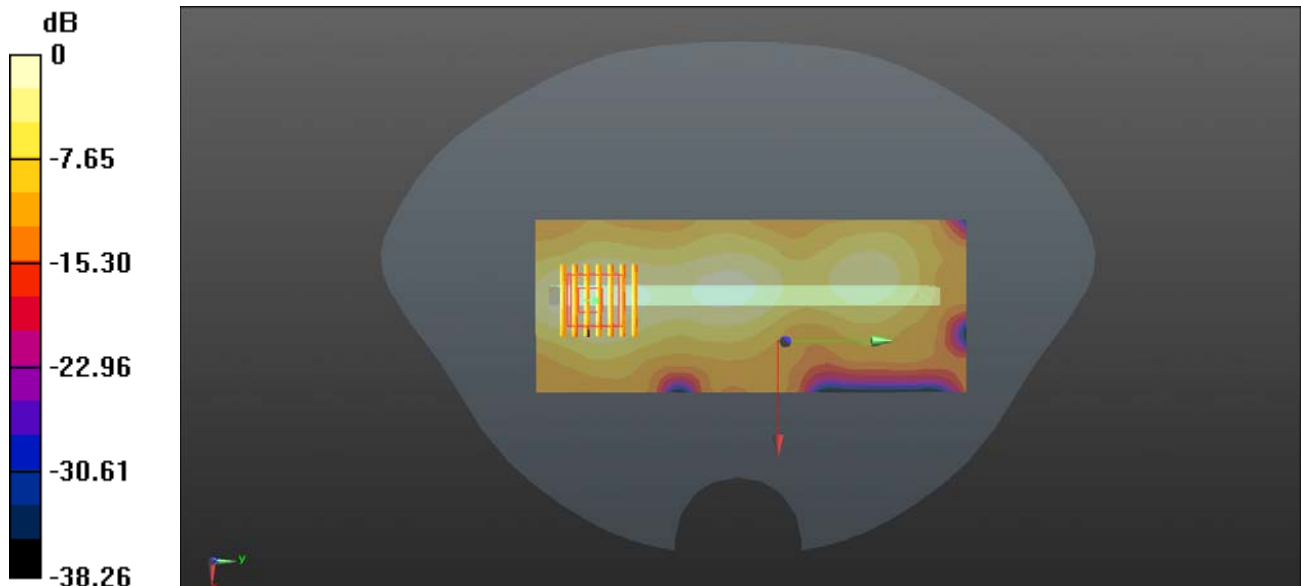
Ch78/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.204 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.0930 W/kg

SAR(1 g) = 0.043 W/kg; SAR(10 g) = 0.021 W/kg

Maximum value of SAR (measured) = 0.0473 W/kg



0 dB = 0.0473 W/kg

ANNEX D EUT EXTERNAL PHOTOS

Please refer the document "BL-SZ2030336-AW.pdf".

ANNEX E SAR TEST SETUP PHOTOS

Please refer the document "BL-SZ2030336-AS.pdf".

ANNEX F CALIBRATION REPORT

Please refer the document "CALIBRATION REPORT.pdf".

--END OF REPORT--